U.S. Patent Application Specification

Authoring Guide

for WordPerfect XML Template

December 14, 1999

United States Patent and Trademark Office

Washington, DC 20231

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1 INTRODUCTION

Annual filings of patent applications are projected to increase to 275,000 in FY2002 — an increase of over 27% since FY1997. However, the United States Patent and Trademark Office (USPTO) staff resources will not increase at the same rate. Even with planned increases in the number of examiners, manually processing the physical volume of paper represented by this number of applications will tax the USPTO's ability to store and process applications while maintaining a high level of service to applicants. The USPTO recognizes this problem and has formulated a strategy for implementing an electronic workplace. As one component of this effort, WordPerfect is used to author electronic versions of the Specification.

1.1 PURPOSE AND SCOPE OF THIS GUIDE

The purpose of this Specification Authoring Guide is to provide you with the information needed to author structured Specification documents. This guide assumes that you are familiar with computers and have a basic knowledge of various hardware, software, and functions. If at any time you have questions regarding computer hardware or software not related to the WordPerfect authoring tool, please refer to the original manuals provided by the manufacturer.

1.1.1 AUDIENCE AND SCOPE OF PILOT

The Specification Authoring Guide is intended to assist those firms and individuals participating in the implementation of EFS Pilot for electronically facilitated patent examination.

Note: Bio-Technology Utility applications will not be accepted for this version of the Pilot and should be submitted via a paper filing.

1.2 CONVENTIONS

The following list contains the conventions used in this guide to represent common terms, emphasize items, and help you identify certain text.

Bold	Indicates a menu option, icon name, button name, keyboard key or combination of keys, e.g., "the **Print** button." Keyboard keys appear in all caps, e.g., the **DELETE** key.
Italic	Indicates emphasis, e.g., "All Specifications *must* be successfully validated before they are submitted."
Bold Italic	Indicates that an item is found in the glossary list (see Appendix A). The first instance of a term in a section appears in bold italic, e.g., "WordPerfect validates your Specification document against a ***DTD***." Subsequent instances appear as normal text.

<element/tag>	Text contained within angle brackets indicates the name of an ***element*** or ***tag***, e.g., "the <paragraph> element."
[label]	Text contained within brackets indicates the name of a ***label***, e.g., "the [application reference] label."

Note: Indicates that the included text is additional information that may be helpful to you. This convention may also be used for a ***Warning*** or ***Reminder***.

1.3 GETTING STARTED

To begin authoring a Specification using WordPerfect with XML, you must complete all of the steps presented in Section 2, Set Up. New users should read Section 3, Using WordPerfect with XML, for general instructions. Section 4, Authoring A Specification, takes you step by step through the process of authoring a Specification. Section 4 assumes that you understand or will refer to the background information covered Section 3. The flow chart presented in provides an overview of the authoring process and indicates the relevant sections in this guide for novice and experienced users.

Note: You may create the larger text portions of the Specification using your current word processor, convert to WordPerfect format, then copy and paste the text into the WordPerfect XML template. See Section 4.17.1 for detailed instructions.

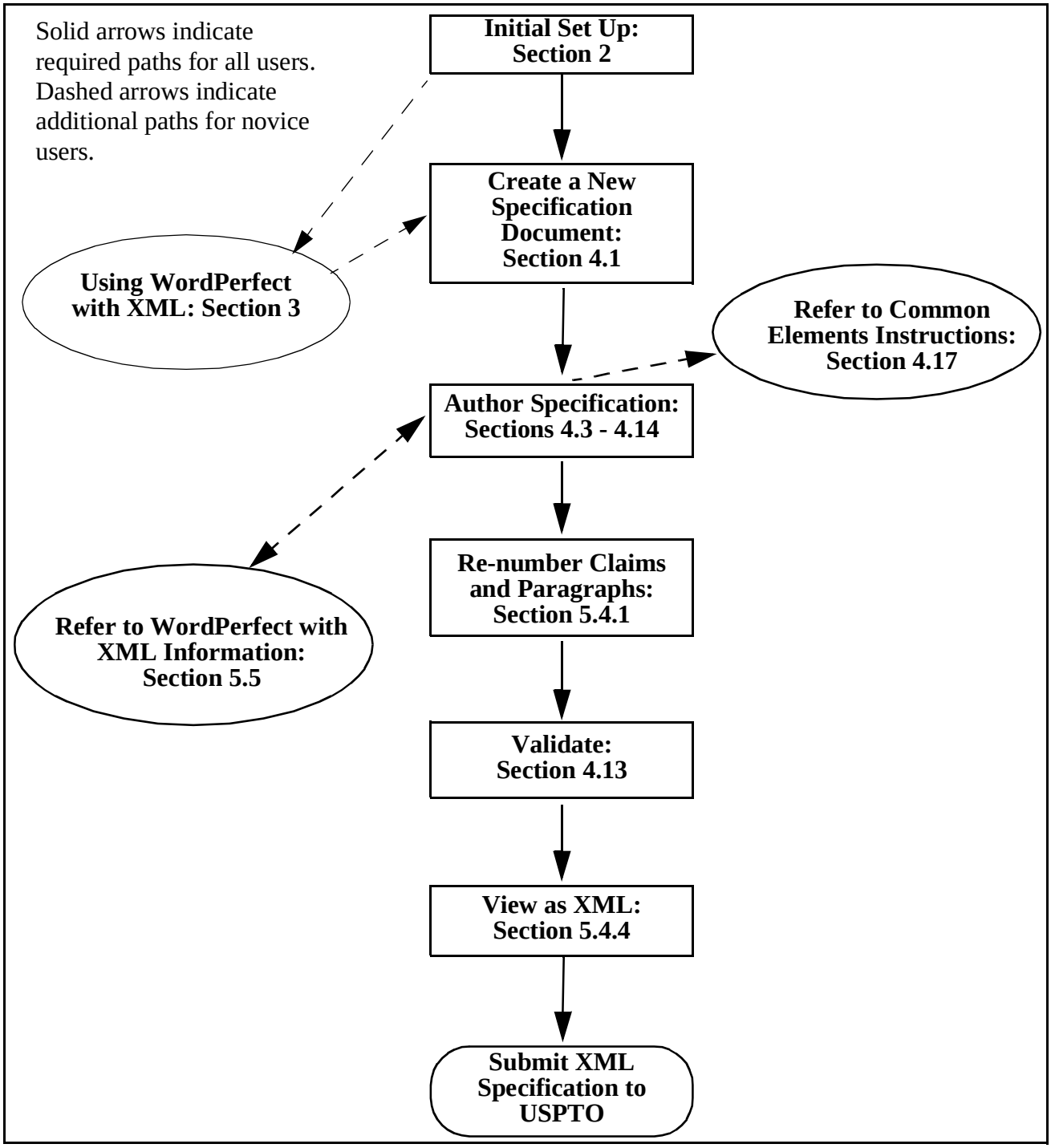

Figure 1-1 Overview of Authoring Process

2 SET UP

After installing WordPerfect and any provided USPTO files you must complete the following steps to ensure that all customizations are available as you author.

1. Open WordPerfect.
2. From the **Tools** menu, select **Settings**. The **Settings** window opens (see Figure 2-1).

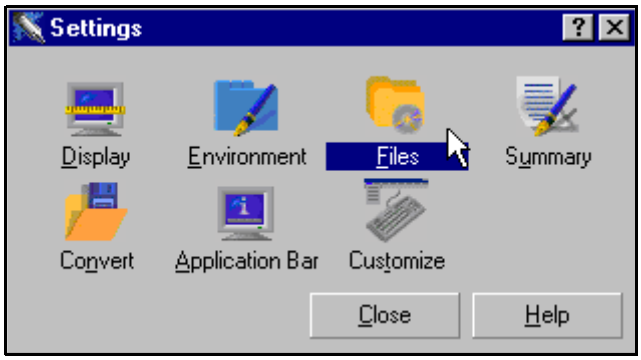

Figure 2-1 Settings Window

3. Click on the **Files** button. The **Files Settings** window opens.
4. Click the **Template** tab (see Figure 2-2).

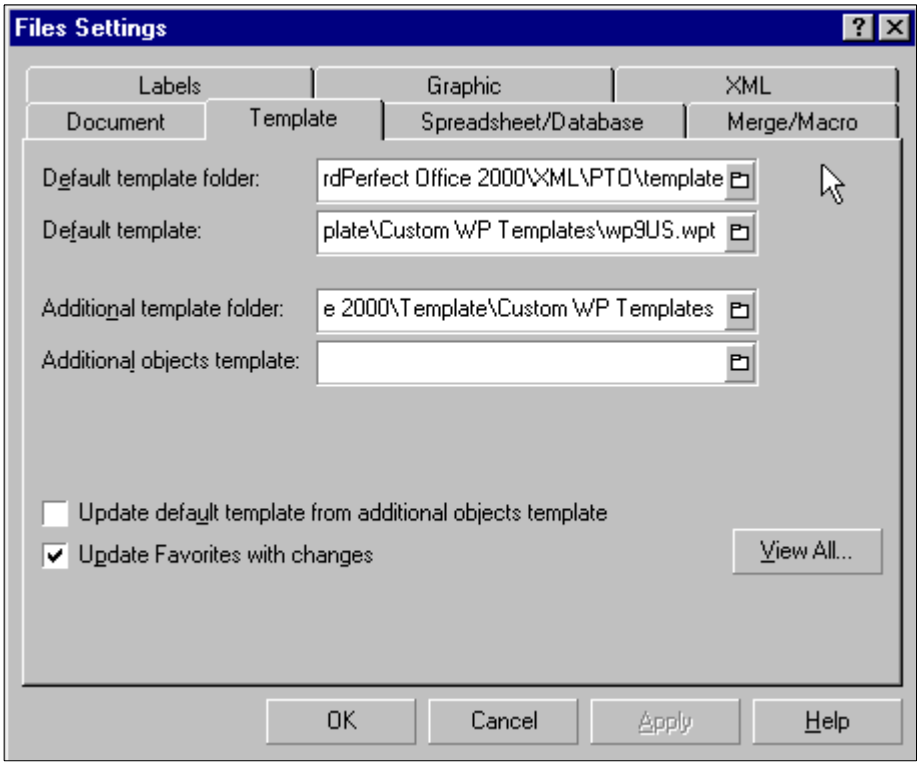

Figure 2-2 Files Settings Window: Template Tab

5. Set the **Default template folder** to the following:
   C:\Program Files\USPTO\Authoring Tool\Version 1.0\Template\EFS.
6. Set the **Default template** to the following:
   C:\Program Files\Corel\WordPerfect Office 2000\template\Custom WP Templates\wp9US.wpt.

Note: Usually the **Default template** option is already set to the file specified in Step 6; however, because you changed to the Default template folder setting, you must reset the file with the correct path for the settings to become active.

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7. Leave the **Additional template folder** as:
   C:\Program Files\Corel\WordPerfect Office 2000\Template\Custom WP Templates.
8. Set **Update default template** to Unchecked.
9. Set **Update Favorites with changes** to Checked.
10. Click the **Apply** button.
11. Click on the **Merge/Macro** tab at the top of the window (see Figure 2-3).

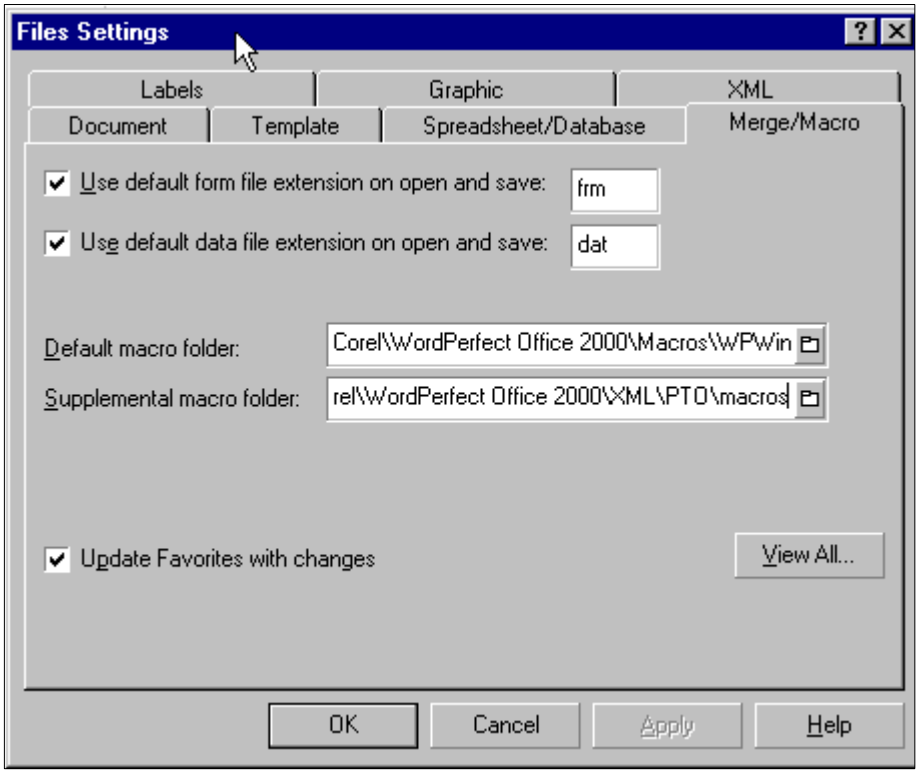

Figure 2-3 Files Settings Window: Merge/Macro Tab

12. Set the **Supplemental macro folder** to:
    C:\Program Files\USPTO\Authoring Tool\Version 1.0\Macros

13. Click the **Apply** button.
14. Click the **Document** tab (see Figure 2-4).

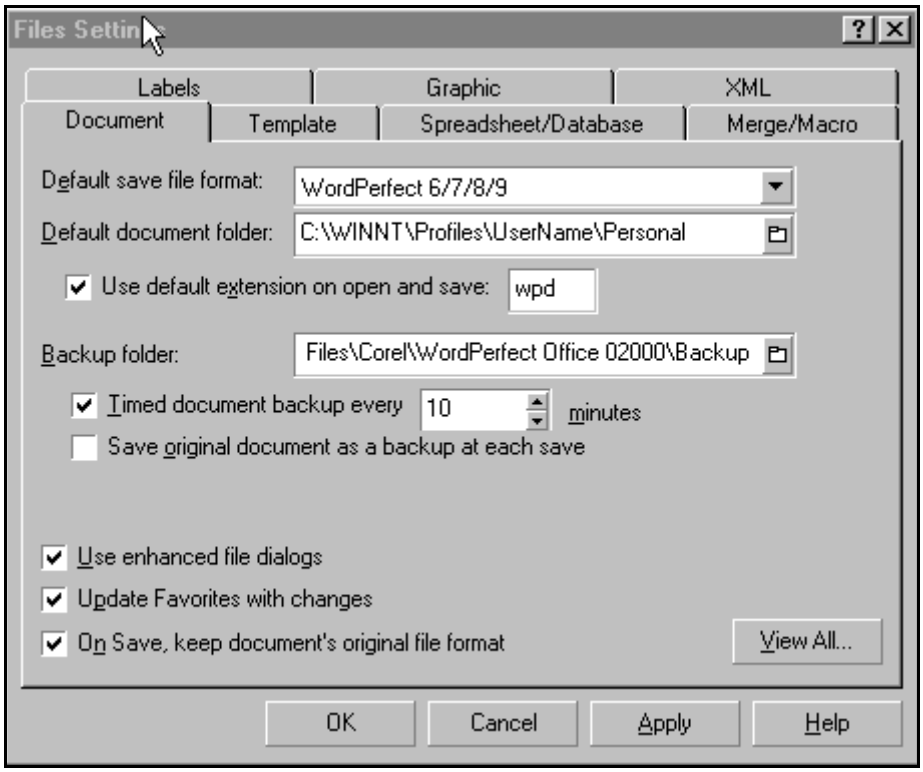

Figure 2-4 Document Tab

15. Set the **Default save file format** to **WordPerfect 6/7/8/9** by clicking on the down arrow and selecting it from the drop list.
16. Set **On Save, keep document's original file format** to Checked.
17. Click the **OK** button. You return to the **Settings** window (refer back to Figure 2-1). Click the **Close** button.
18. From the **File** menu select **New from Project**.
19. Click the **Options** button and select **Refresh Projects** from the list.
20. Click the down arrow in the first field, if **EFS** appears in the drop down menu then you are complete (see Figure 2-5). Click the **Close** button to exit or click on **Specification** and then **Create** to create a new document (see Figure 2-6).
21. Immediately save the document. Ensure that the file format is **WordPerfect 6/7/8/9**.

22. If **EFS** does not appear in the list then repeat Step 6. Then repeat Steps 17-20.

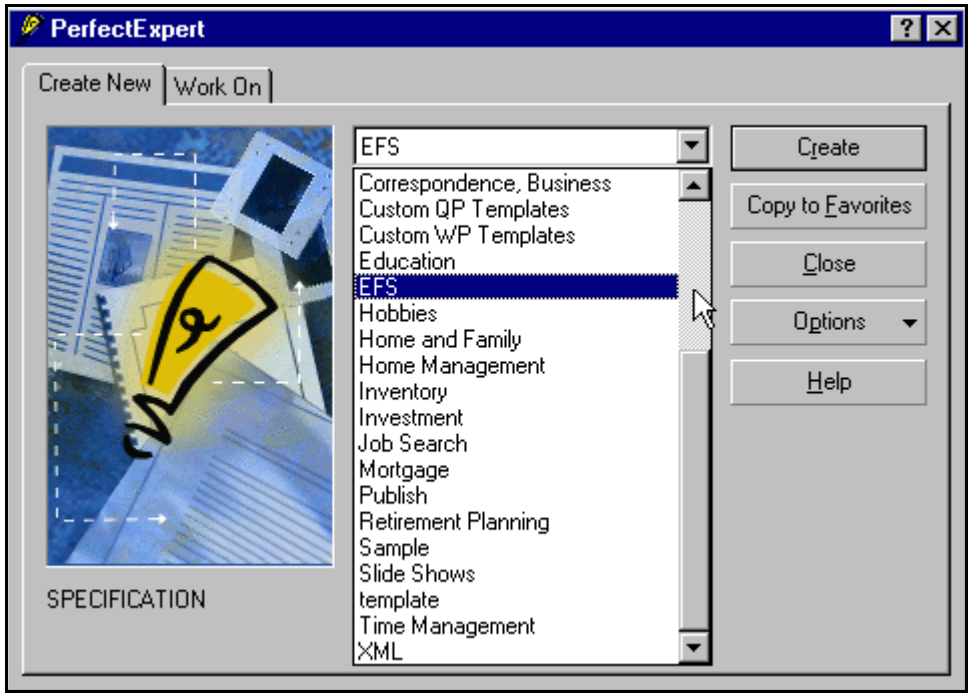

Figure 2-5 Select EFS From The Drop Down Menu

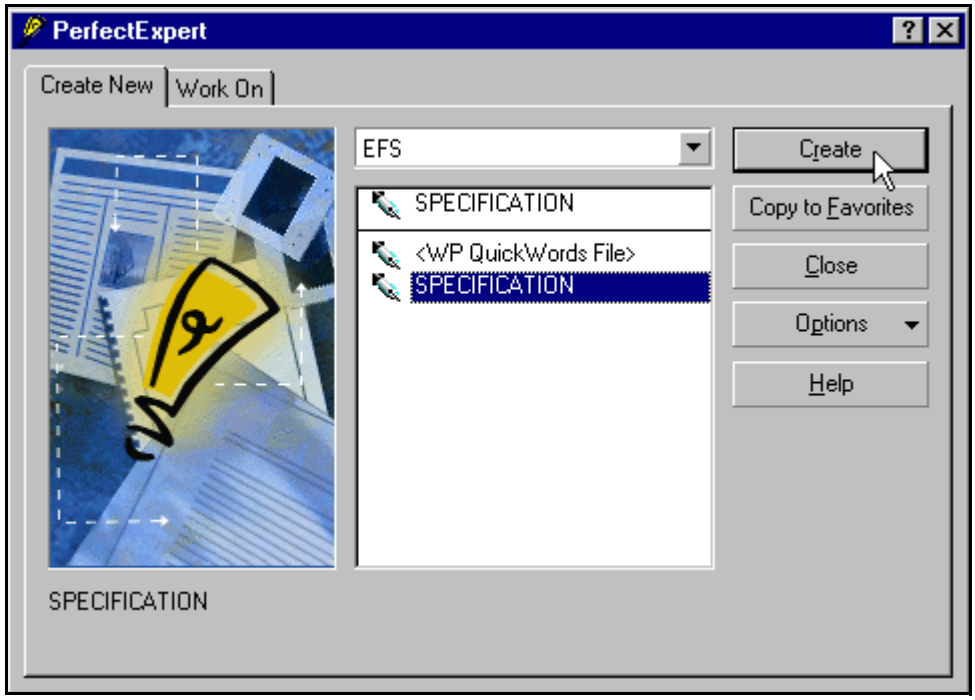

Figure 2-6 Select SPECIFICATION and Click the Create Button

3 USING WORDPERFECT WITH XML

The primary difference between using WordPerfect with XML to author a Specification and using a common word processing program, such as MS Word, is that the Specification structured document is designed using eXtensible Markup Language (***XML***). XML uses markup codes, called ***elements***, to categorize parts of a document. The USPTO uses these elements to electronically process the information you submit. Keep your document open as a visual reference while you read the following chapter.

3.1 THE WORDPERFECT ENVIRONMENT

The WordPerfect environment consists of a ***Document Window*** that displays your submission and an ***XML Tree*** that displays the ***elements*** in the document.

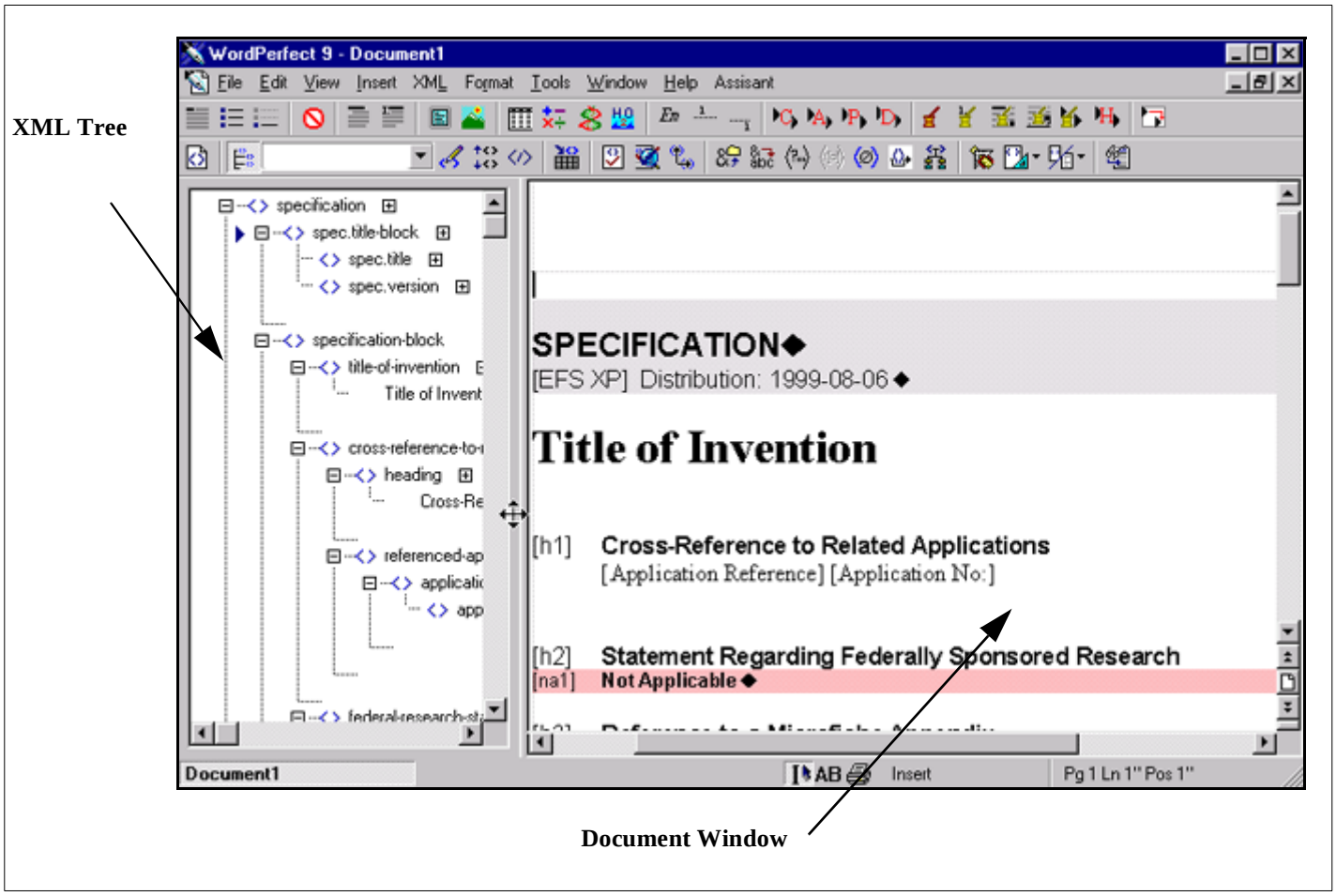

Figure 3-1 XML Tree and Document Window

3.2 OVERVIEW OF ELEMENTS AND TAGS

This section provides an overview of elements and how they are used to complete a Specification.

3.2.1 DEFINITION OF AN ELEMENT AND ITS ASSOCIATED TAG

An ***element*** is the structural building block of the Specification structured document you submit to the USPTO. All content within a document must be contained within elements. Elements can also contain other elements, called ***child elements***. When you insert an element, it is graphically represented in the **Display Codes** view, by ***Start*** and ***End Tags*** that contain the element's name. **Start Tags** appear as a right-facing block arrow and End Tags appear as a left-facing block arrow (see Figure 3-2). Empty elements are represented by a rectangular tag. You can not add data or child elements to an empty element. To access the **Display Codes** view, click on the **Change XML Codes** button (right) and from the drop down menu select **Display Codes**.

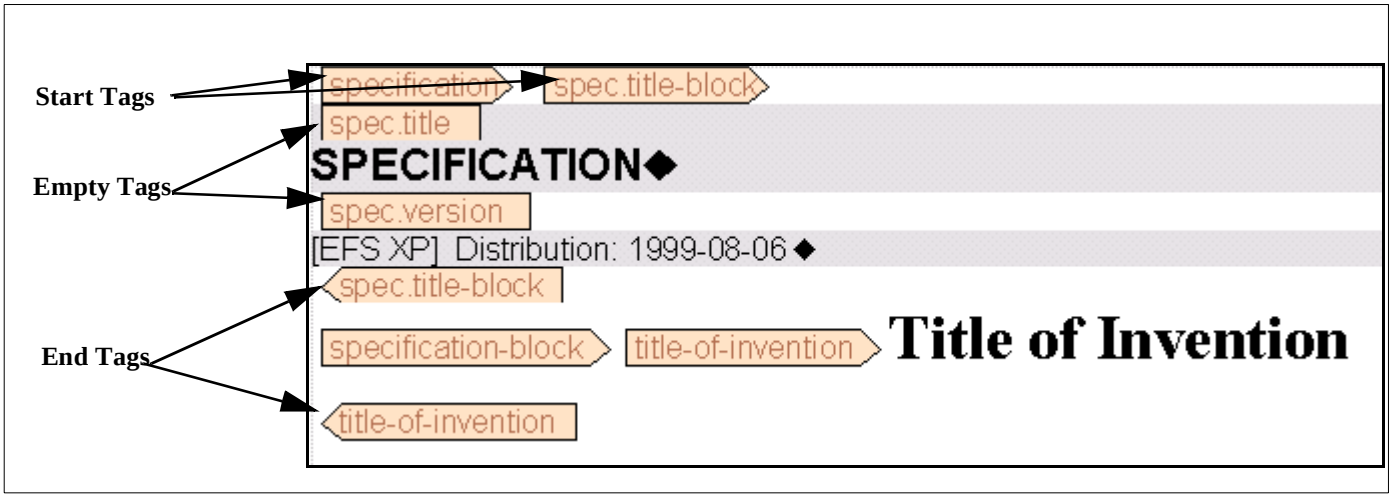

Figure 3-2 Viewing Document with Codes (Tags) Displayed

You can quickly move from one element to the next using the **Navigation** menu option. From the **Assistant** menu select navigation. Click on either **Next element** (F10) or **Previous element** (F9).

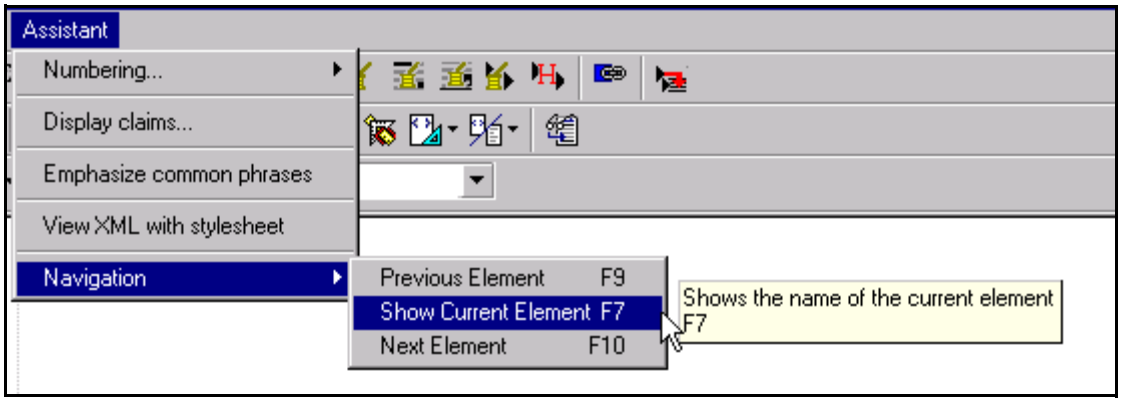

Figure 3-3 Navigation Menu Option

Clicking the **Show current element** (F7) option displays the name of the current element briefly in the lower, left corner of the screen (see Figure 3-4).

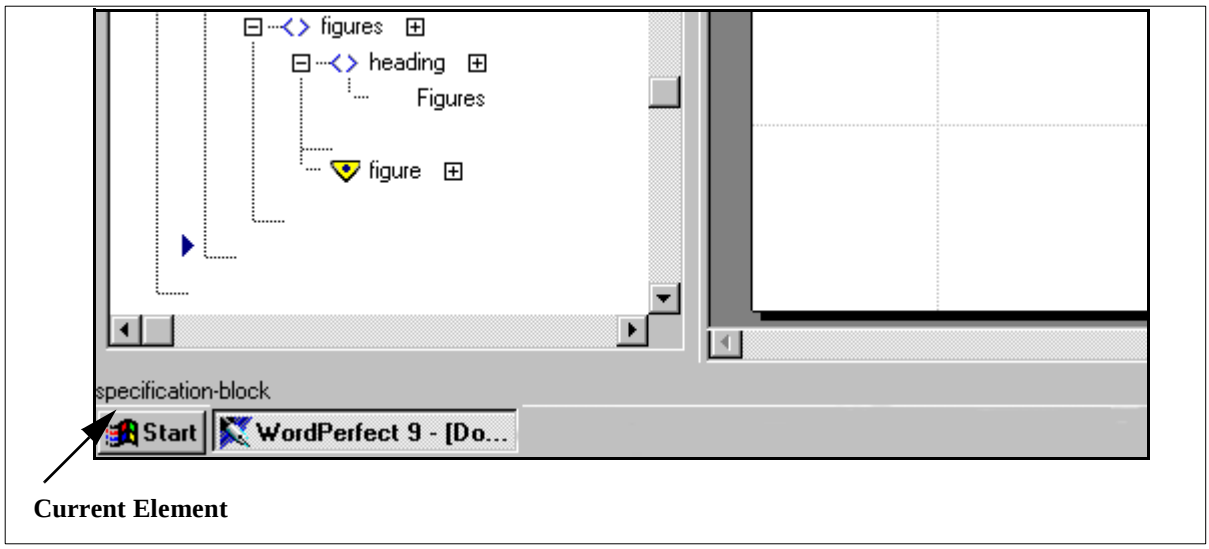

Figure 3-4 Using the Show Current Element Menu Option

3.2.2 ELEMENTS AND THE XML TREE

The **XML Tree** represents elements within your document hierarchically. The ***Start*** and ***End Tags*** of the elements are represented by brackets that enclose all child elements, textual data, and attribute information. The top of the bracket indicates the beginning of the element's contents; this is analogous to a start tag. The bottom of the brackets indicates the conclusion of the elements content (see Figure 3-5); this is analogous to the end tag. The blue triangle indicates the current position of the cursor within the **Document Window**. Yellow triangles indicate where the Specification is not valid according to the ***DTD*** (refer to Section 4.16.2).

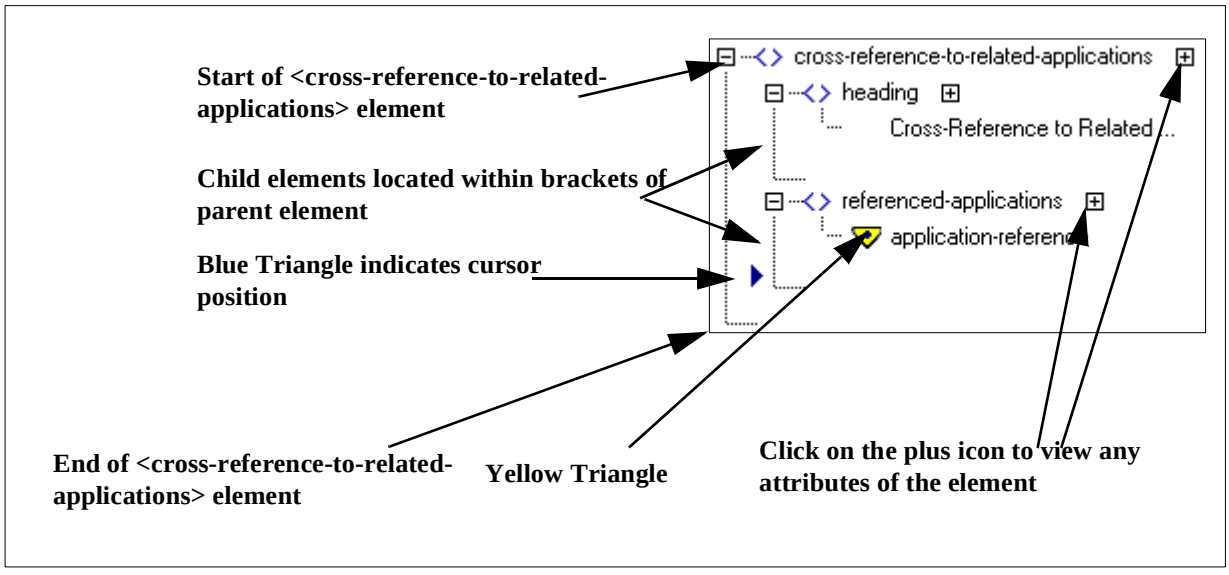

Figure 3-5 Understanding the XML Tree

You can navigate between elements using the XML Tree. Simply click on the start bracket of the element representing your desired location. You may also use the up and down arrows on your keyboard to move to the next or previous element. As you press the arrow key, the blue diamond moves accordingly.

3.2.3 ELEMENTS AND THE DISPLAY CODES VIEW

In addition to using the ***XML Tree*** to view and navigate through the elements in your document, you can use the **Display Codes** view. When you activate the Display Codes view ***Start*** and ***End Tags*** appear, representing the beginning and end of each element. Instructions follow.

1. Click the **Change XML Codes** button on the toolbar.
2. Choose **Display Codes** from the drop down menu (see Figure 3-6).

Figure 3-6 Display Codes

This view is useful in determining the location of text with respect to the elements. For example, in Figure 3-7 the cursor is located between the <title-of-invention> start and end tags.

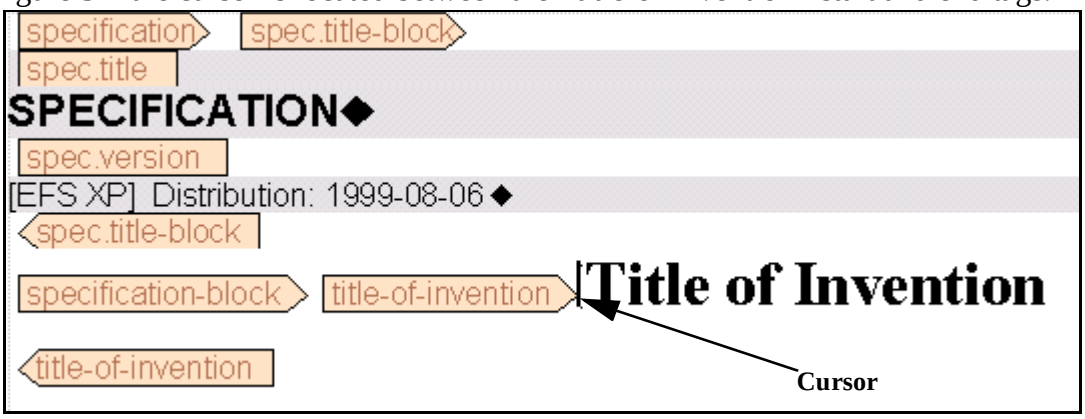

Figure 3-7 Tags On View

3.2.4 INSERTING ELEMENTS

3.2.4.1 Method 1: Using the Elements Window

You access the **Elements** window two ways: Select **Elements...** from the **Insert** menu or right click in the ***XML Tree*** and select **Elements** from the menu (see Figure 3-8).

The Elements window displays the elements available for insertion at cursor's current position in the current element. The first item in the window is always the ***end tag*** for the current element. To see the elements that become available when the cursor is just outside

the current element, double click the end tag (in the Elements window) to move the cursor outside the current element. When you may add text within the current element you will see a **TEXT (PC Data)** in the Elements window. This indicates that you can enter text.

To insert an item from the Elements window double-click on it. It is recommended that novice users keep the Elements window open at all times so that the elements available for insertion are easily determined. As you become more familiar with WordPerfect and the Specification template, you may find the other methods described in this section faster.

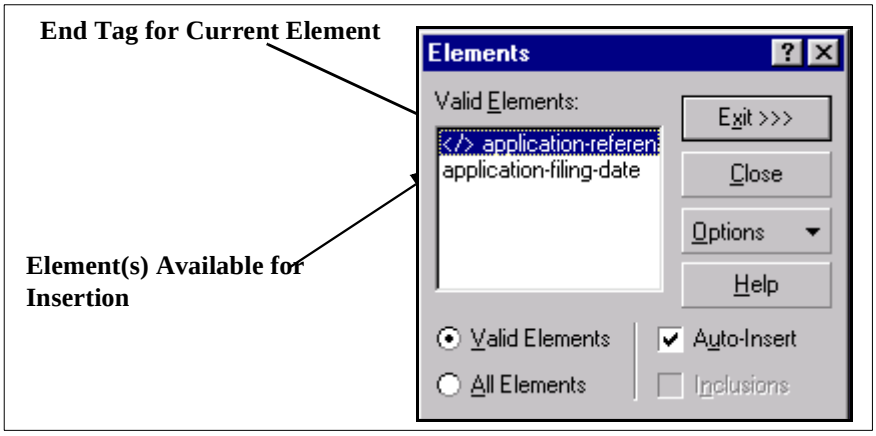

Figure 3-8 Elements Window

Note: Occasionally the **Elements** window closes automatically after inserting an element. Use one of the methods described in this section to re-open it.

4 AUTHORING A SPECIFICATION

This chapter contains information regarding authoring a Specification using WordPerfect. Sections 4.1-4.15 contain step by step instructions for authoring the Specification. Each section in the guide corresponds to section in the Specification document. During the authoring process you may need to refer to Section 4.17, Commonly Used Elements, for information regarding elements that are used within multiple sections of the Specification.

Note: WordPerfect offers multiple methods of inserting elements. In order to provide concise instructions, this chapter instructs you to use the **Elements** window, or when applicable, the toolbars. Please refer to Section 5.3 for information regarding all methods of inserting elements.

4.1 CREATE A NEW SPECIFICATION

This section discusses the steps needed to create a new Specification, enter the title and create the optional copyright statement.

1. Click **File**. From the drop down menu select **New from Project**. The **PerfectExpert** window opens.

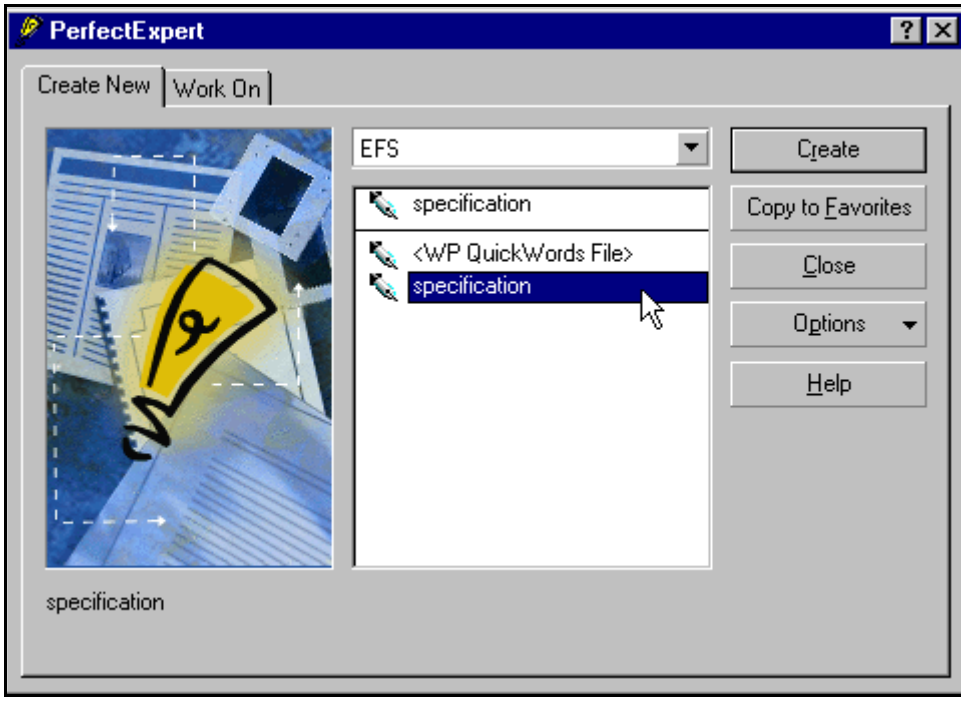

Figure 4-1 PerfectExpert Window

2. Click on the **Create New** tab. Click on the down arrow to the left of the **Create** button and select the **EFS** folder containing the Specification template.

3. Select the **Specification** template from the window and click on the **Create** button. The macro warning in Figure 4-2 may appear. Click the **No** button. The Specification document opens.

Figure 4-2 Macro Warning

4. The message box in Figure 4-3 appears. Click the **OK** button. This initiates the USPTO's WordPerfect customizations.

Figure 4-3 Initializing

Note: If the message box in Figure 4-3 does not appear, then your installation is corrupt. Refer back to the Setup instructions in Section 2. If the problem persists, contact your system administrator.

Note: The XML Tree will automatically appear when you click inside the template.

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5. Immediately after creating a new document, save the file in WordPerfect 6/7/8/9 format (see Figure 4-4).

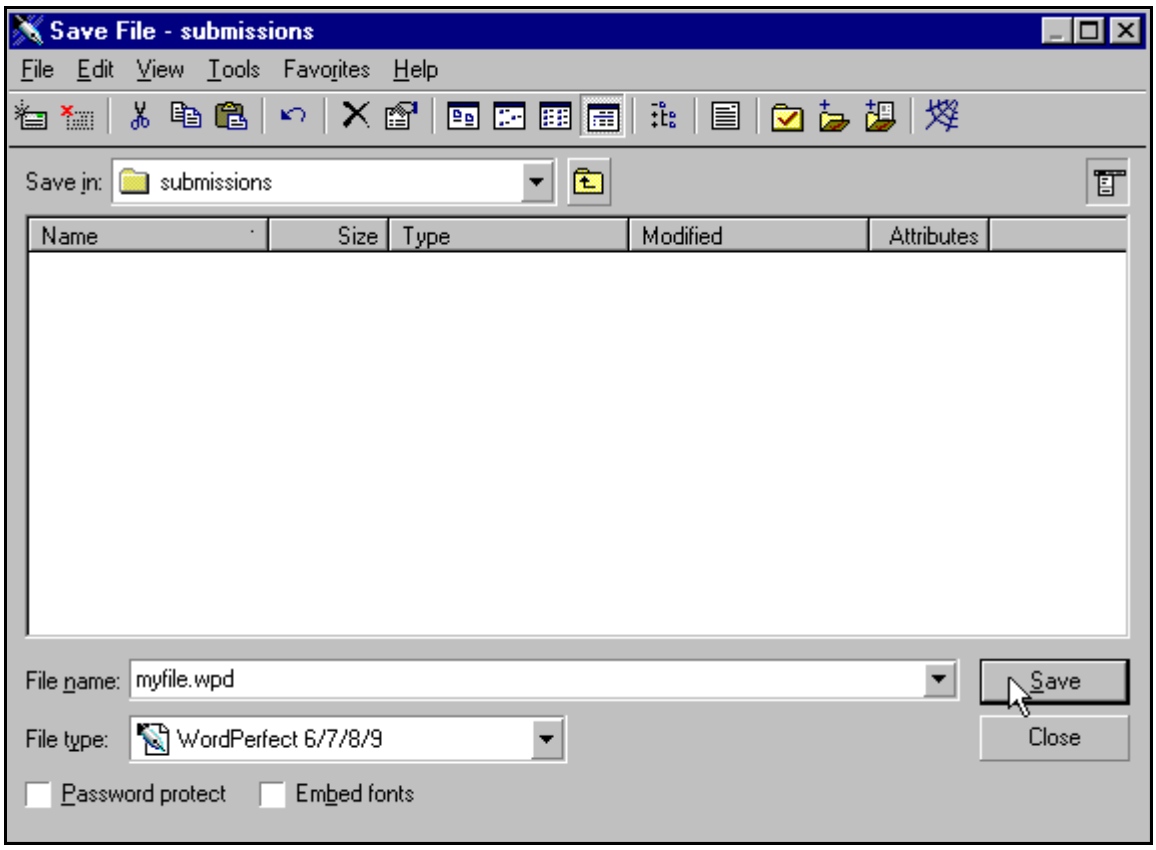


Figure 4-4 Save File Window

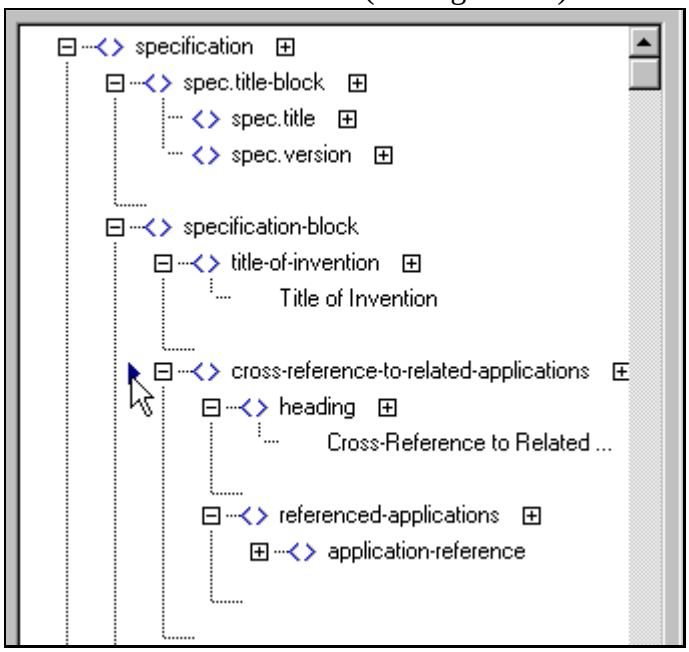
Be sure to save the file intermittently during the process of authoring your document. Consider activating the auto save feature. Select **Settings** from the **Tools** menu. Click the **Files** button and then click the **Documents** tab. This ensures that only a limited amount of information is lost in the unlikely case of a computer or software malfunction.

6. Activate the **Elements** window. Click on **Elements**... from the **Insert** menu.
7. In the **Elements** window, click on the **Option** button and ensure that the option **Never Prompt for Attributes** is selected.

4.2 TITLE OF INVENTION AND COPYRIGHT STATEMENT

1. In the Document Window, select the default text, "Title of Invention" and replace with your invention's title.

2. Optional Step: Adding a Copyright Statement. In the XML Tree, click next to the starting bracket for the <cross-reference-to-related-applications> element so that the blue triangle appears as in . The <copyright-statement> element appears in the **Elements** window (see Figure 4-5). Double click on it to insert it.



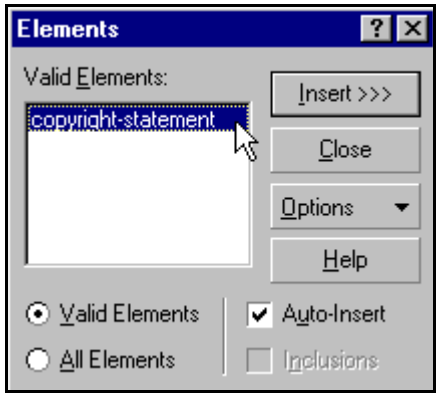


Figure 4-5 Elements Window

Figure 4-6 Adding the Copyright Statement Element

Adding the Copyright Statement Element

2a. Type your copyright statement.

2b. Optional Step: If you enter a copyright date, then tag the date. Select the date. Double click on the <copyright> element in the Elements window to insert it (the <copyright element appears in the ***Elements*** window after you insert the <copyright-statement> element).

4.3 CROSS REFERENCE TO RELATED APPLICATIONS

1. In the **XML Tree,** click immediately to the left of the <not-applicable> element in the **Cross Reference to Related Applications** section.
2. Press the **DELETE** key. A yellow triangle appears in the XML Tree and the <continuity-data> and <referenced-applications> elements appears in the **Elements** window.

Referenced Applications Instructions

1. Insert the <referenced-applications> element by double clicking on it in the **Elements** window. Start and end brackets for the element appears in the **XML Tree**.

2. Type any text necessary for the Referenced Applications. You may only insert the Referenced Applications once.
3. Use the <patent-reference> or <application-reference> elements to enter references to a patent or application. These elements appear in the ***Elements*** window when entering within the <referenced-applications> element. Refer to Section 4.17 for more detailed instructions for these elements.

Note: To enter an <application-reference> element you must activate **Display Codes** first. Click the **Change XML Codes** button and from the drop-down menu select **Display Codes**.

4. To add additional patent or application references repeat step 3 as needed.
5. To insert a blank line after an element, or between lines of texts, press SHIFT ENTER
6. To add additional patent or application references, double click on the </> application-number, </> application-filing-date, or </> parent-reference end tag in the Elements window. Double click on the patent or application reference in the elements window.

Continuity Data Instructions

Note: To enter Continuity Data you must activate **Display Codes** first. Click the **Change XML Codes** button and from the drop-down menu select **Display Codes**.

1. Insert the <continuity-data> element by double clicking on it in the ***Elements*** window. Start and end brackets for the element appear in the **XML Tree**.
2. Double click on the Parent element in the ***Elements*** window. The Parent in Continuity Data window opens. Create the continuity information by selecting the correct phrases from the first two lists. A preview of the continuity statement appears below the phrase lists. Supply the application number in the **App No.** field (Figure 4-7).

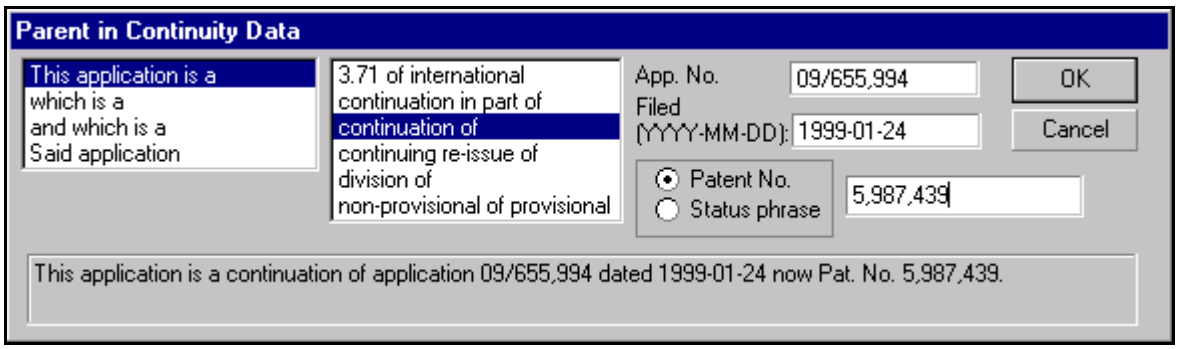


Figure 4-7 Continuity Data

3. If you select the Said Application phrase, the **No.** field appears in which you enter the application to which you are referring.

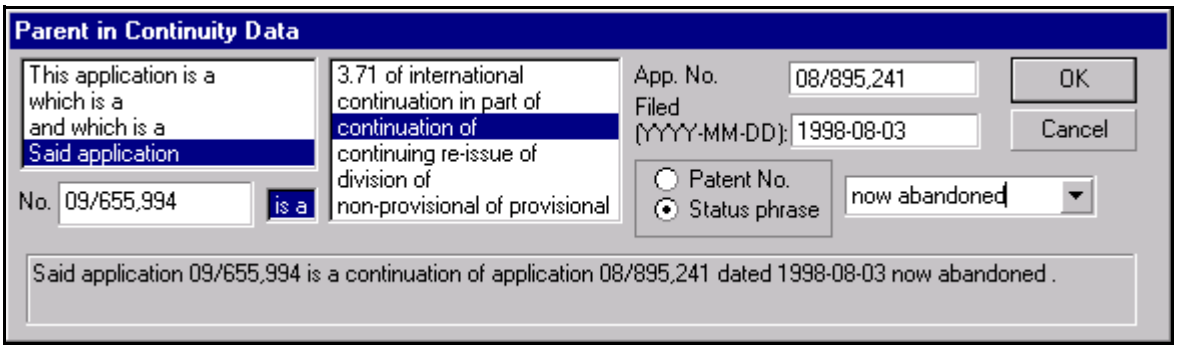


Figure 4-8 Continuity Data with "Said Application"

4. Click in the **Filed** field and type the Filing Date using the YYYY-MM-DD format.
5. Provide a patent number or status phrase. To provide a patent number, select the **Patent No.** option and then type the number in the adjacent field. To provide a status phrase select the **Status phrase** option. A drop down arrow appears in the adjacent field. Select the needed Status Phrase. To type your own Status Phrase, select the blank option from the drop down list and then click in the field and type the phrase.
6. Click the **OK** button.
7. To continue the continuity chain the cursor (**Display codes** should still be active) should be to the left of the </continuity-date> end tag. If it is not click at position shown in Figure 4-9.

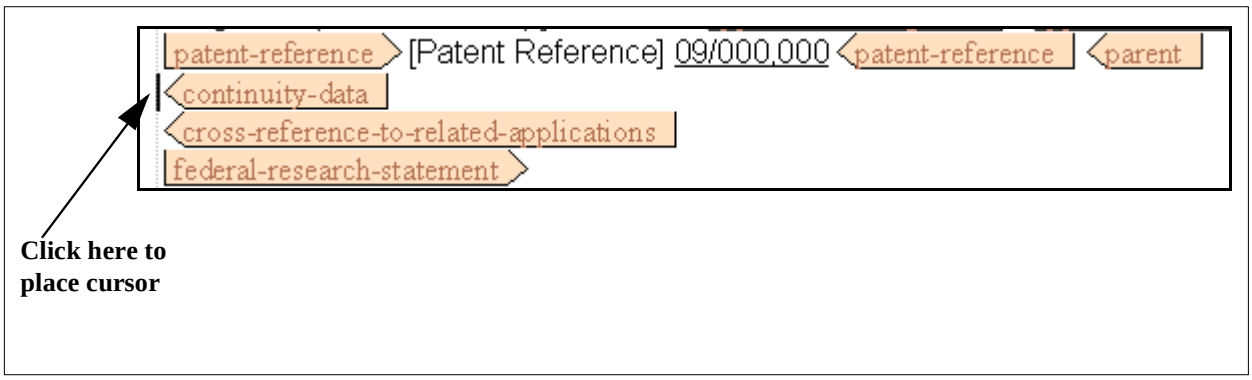


Figure 4-9 Placing Cursor to Continue Continuity Chain

8. Repeat steps 2-8 as needed.
9. Click the **Change XML Codes** button and select **Hide Codes**.

4.4 STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH

If a statement regarding federally sponsored research is not needed, leave the <not-applicable> element. If it is needed, use the following instructions to add the statement.

1. In the **XML Tree**, click immediately to the left of the <not-applicable> element in the **Statement Regarding Federally Sponsored Research** section.
2. Press the **DELETE** key. A yellow triangle appears in the XML Tree and the <paragraph-federal-research-statement> element appears in the **Elements** window.
3. Insert the element by double clicking on it.
4. Type the statement.
5. Within the statement, select any grant numbers, contract numbers or US Agency references and tag them with <grant-number>, <contact-number> and <us-agency> elements, respectively.

4.5 REFERENCE TO A MICROFICHE APPENDIX

You must provide the following information when submitting computer program listing via microfiche. Microfiche is required when the number of lines submitted exceeds 540 at 65 characters per line. This corresponds to the paper practice of submitting microfiche when the number of pages exceeds 10.

1. In the **XML Tree,** click immediately to the left of the <not-applicable> element in the **appendix-data** section.
2. Press the **DELETE** key. A yellow triangle appears in the XML Tree and the <program-reference> element appears in the **Elements** window.
3. Insert the element by double clicking on it. The [Program Reference] label appears. The <fiche-count> element appears in the Elements window.
4. Insert the <fiche-count> element by double clicking on it. The [Count No.:] and [Fiche Frame:] labels appear.
5. Click after the [Count No.:] label and type the Fiche Count (see Figure 4-10). This gives the number of microfiche for a computer program listing appendix; MPEP 608.05; 37 CFR 1.96(c).
6. Click after the [Fiche Frame:] label and type the Fiche Frame (see Figure 4-10). This gives the frame of microfiche for a computer program listing appendix, or the frame

where an assignment is recorded; MPEP 106, 106.1, 301, 324, 608.05; 37 CFR 1.96(c), 3.1, 3.73(b).

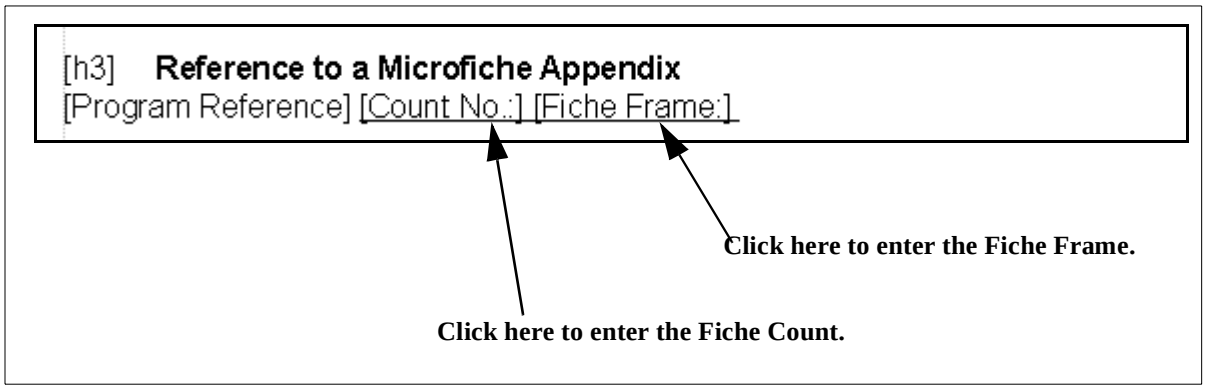


Figure 4-10 Adding Microfiche Information

7. To enter additional references, move to the end tag for the <fiche-count> element by double clicking on it in the **Elements** window. The <program-reference> element appears in the **Elements** window. Insert the element by double clicking on it. Repeat steps 3-6 as needed.

4.6 DESCRIPTION OF RELATED ART

1. In the **XML Tree**, click immediately to the left of the <not-applicable> element.
2. Press the **DELETE** key. A yellow triangle appears in the XML Tree and several elements appear in the **Elements** window (see section 4.17 for information regarding the insertion of these elements.) Insert the element by double clicking on it. Usually you will begin with a <paragraph> element.

4.7 FIELD OF INVENTION

Follow the instruction in Section 4.6.

4.8 BRIEF SUMMARY OF THE INVENTION

Follow the instructions in Section 4.6.

4.9 BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

Follow the instructions in Section 4.6.

Note: In addition to completing the **Brief Description of the Several Views of the Drawings** section, you must attach TIFF images of your drawings at the end of the document (see Section 4.14).

4.10 DETAILED DESCRIPTION OF THE INVENTION

The first <paragraph> element has already been provided. Refer to Section 4.17 for information regarding how to use the available child elements.

4.11 DEPOSIT OF COMPUTER PROGRAM LISTINGS

1. In the **XML Tree** click next to the <not-applicable> element in the **Deposit of Computer Program Listings** section.
2. Press the **DELETE** key. A yellow triangle appears in the XML Tree and the <program-listing> element appears in the **Elements** window. Insert the element by double clicking on it. The [Program Listing] label appears.
3. Click immediately to the right of the label and enter the program listing information. The maximum number of lines allowed for submission is 540 lines at 65 characters per line. This corresponds to the paper practice of submitting computer program listing under 11 pages with the Specification. Any listings over 540 lines must be submitted via microfiche and referenced in the "Reference to a Microfiche Appendix" section of the Specification (see Section 4.5).

4.12 WHAT IS CLAIMED IS:

As at least one claim is required for a Specification, the first <claim>, <preamble-claim>, and <paragraph-claim> elements have been added for you.

1. In the **XML Tree**, click below the start bracket for the <preamble-claim> element so that the blue triangle appears next to it. Type the preamble for your claim.
2. In the XML Tree, click below the start bracket for the <paragraph-claim> element so that the blue triangle appears next to it. Type the body of the claim.
3. To add additional claims:

   3a. Move to the end tag for the <claim> element by double clicking on the </> preamble or </> paragraph-claim end in the ***Elements*** window. If the end tag in the ***Elements*** window reads, "</> claims" then skip this step and proceed to the next step.

   3b. From the ***Elements*** window, insert the <claim> element of click the **Claim** button on the toolbar. The <claim> element and the <preamble-claim> element are inserted automatically.

Note: While MPEP regulations do not require a preamble, the <preamble-claim> element is required within this template, as most claims will contain a preamble. If you do not need a preamble for your claim you do not need to type text within the <preamble-claim> element.

3c. Move the cursor to the right of the claim label ("[c]") and type the preamble for your claim.

3d. Move to the end tag for the <preamble-claim> element by double clicking on it in the elements window.

3e. Insert the <paragraph-claim> element by double clicking on it in the Elements window or,

To format an individual claim as a series of step by step instructions, insert a <claim-step> element by double clicking on it in the ***Elements*** window. A <claim-step> allows an individual claim paragraph to be formatted in a step by step manner as opposed to one long paragraph; MPEP 608.01 (a), 608.01 (i), 608.01 (m) 37 CFR 1.75, 1.77. You may also insert this element by clicking the corresponding toolbar button. you can enter as multiple <claim-step>. After you insert the <claim-step> element you must insert the <paragraph-claim> element in order to type the claim test. You can insert additional steps within the <claim-step> by double clicking on the </> paragraph-claim end tag in the ***Elements*** window.

When the <paragraph-claim> element is inserted, the final period is automatically inserted with it.

4. Tag all references, within the preamble of each claim, to a dependant claim. For example, in the phrase "The hammer of CL. 1, wherein...," the text "CL. 1" should be entered as a Dependant Claim Reference.

4a. Number the claims by selecting **Numbering/Claims Only** from the Assistant menu.

4b. Click in the document window at the point where you plan to refer to the dependent claim, then click on the **Dependant Claim Reference** button on the toolbar. The **Reference to Dependent Claims** window opens (Figure 4-11).

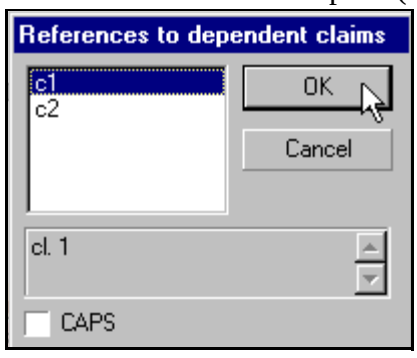


Figure 4-11 References to Dependent Claims

4c. Select the Claim on which your current claim is dependant. If you would like the reference to appear in all capital letters, click the **CAPS** checkbox.

4d. Click on the **OK** button.

5. The following elements are child elements within the <paragraph-claim> element.
   - <chemistry-cwu>
   - <cross-reference>
   - <custom-character>
   - <hybrid-claim-reference>
   - <math-cwu>
   - <subscript>
   - <superscript>

   Refer to Section 4.17 for instructions regarding how to use the above elements, except <hybrid-claim-reference>. This element is used to tag a reference to specific limitations in another claim, other than by dependency on that claim (MPEP 2173.05f). For example, in the following claim the "CL. 1" would be the hybrid claim:

   > [C3] Claim 3: A nail driving system comprising:
   > a nail holder for securely maintaining a nail in a pre-driven position;
   > a hammer according to CL. 1; and
   > a force transmitting means to impart motion to said hammer in order to drive said nail into a post-driven position.

   Instructions for inserting the <hybrid-claim-reference> element follow:

   5a. Click on the **Hybrid Claim Reference** element on the toolbar.

   5b. From the list of claims, select the number ID of the claim to which you are referring (see Figure 4-12).

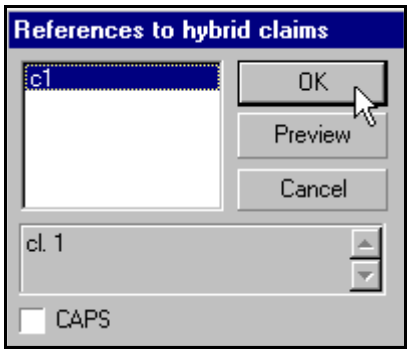


Figure 4-12 Select the Hybrid Claim Reference Number ID

5c. Click on the **OK** button. The hybrid claim reference, appropriately tagged, is inserted.

4.13 ABSTRACT OF THE DISCLOSURE

As this section of the Specification should only consist of one paragraph, the <paragraph> element has already been inserted. Click next to the [p] tag (paragraph tag) and type your abstract. Several child elements are available for use within the abstract; refer back to Section 4.17 for additional information regarding how to use these elements.

4.14 FIGURES

In this section you attach the drawings described in the **Brief Description of the Several Views of the Drawings**, Section 4.9. Remember all images must be scanned at 300 x 300 dpi and saved in a TIFF format.

1. To insert the <figure> element, click to the left of the yellow triangle below the Figures element in the XML Tree. From the elements window, double-click on the <figure> element.
   - <artwork>
   - <chemistry-cwu>
   - <copyright>
   - <math-cwu>
   - <table-cwu>

   Refer to Section 4.17 for detailed instructions regarding using these elements.

2. To insert additional items, you must first move to the end tag for the first <figure> element. Double click on the end tag for the previous figure element to move to it. Be sure that the end tag reads, "</> figure" and *not* "</> figure***s***>". If the end tag is the "</> figure***s***" then skip this step and proceed to the next step.
3. Insert a second <figure> element by double clicking on it in the **Elements** window. Repeat step 1-3 as needed.

4.14.1 IF YOUR SPECIFICATION DOES NOT NEED A FIGURES SECTION

If your Specification does not contain any figures in the **Figures** section then you need to remove the default section from the template. Click the **Remove Figures** button on the toolbar.

Note: If you accidentally remove the Figures section by clicking the **Remove Figures** button, undo the action by selecting **Undo** from the **Edit** menu.

4.15 FINAL STEPS

After you finish authoring the Specification, complete the following steps to ensure a proper submission is created.

1. Save the submission with a unique name. It cannot have the same name as any graphics included in the submission.
2. From the **Assistant** menu, choose the **Renumber All** menu item.
3. To ensure that all graphics have the correct notation and file designation complete the following steps for each entry:

   3a. From the **Insert** menu select **File References**. The **File References** window opens (see Figure 4-13).

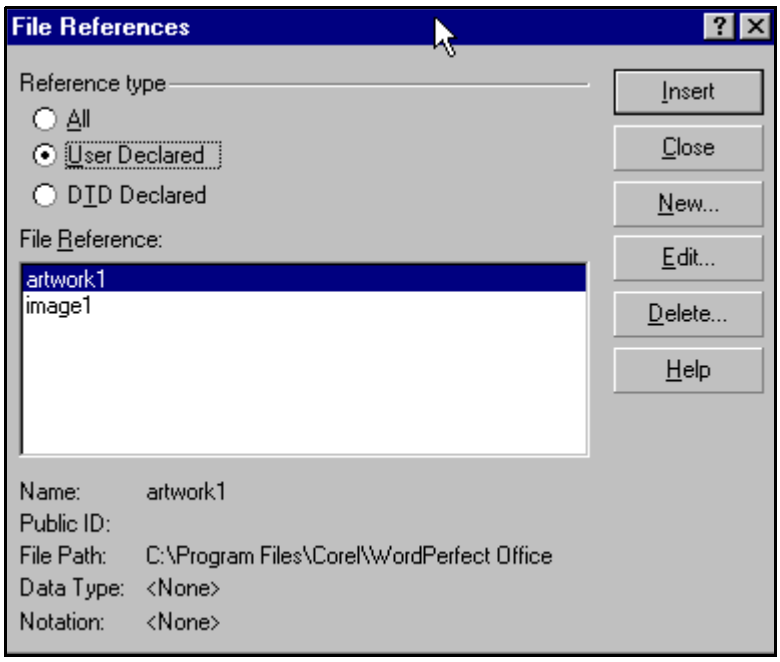


Figure 4-13 File References Window

   3b. Click the **User Declared** radio button.

   3c. In the **File Reference** section, select the first file.

3d. Click on the **Edit** button. The **File Reference: Edit** window opens (see Figure 4-14).

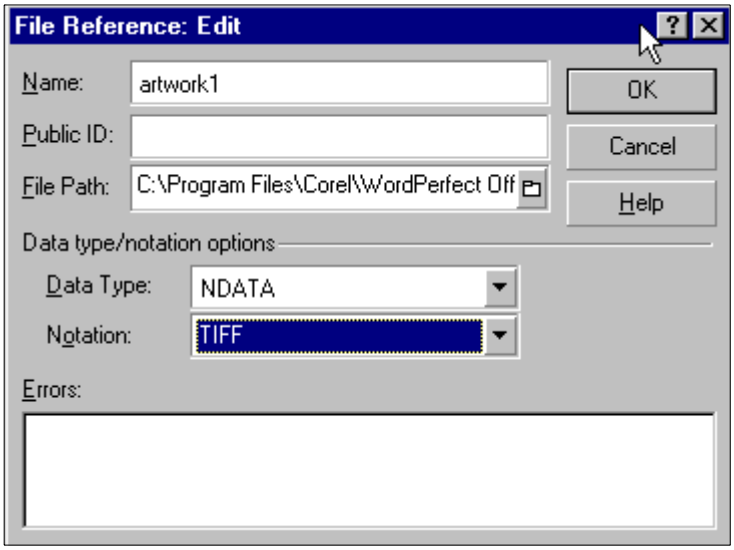


Figure 4-14 File Reference: Edit Window

3e. Click on the down arrow next to **Data Type** and select **NDATA**.

3f. Click on the down arrow next to **Notation** and select **TIFF**.

3g. Click on the **OK** button to return to the **File Reference** window.

3h. Repeat these steps for each entry listed in the **File Reference** area (refer back to Figure 4-13).

4. Validate the document according to the instructions in Section 4.13.
5. View the Specification as an XML file according to the instructions in Section 5.4.4.

4.16 VALIDATION

4.16.1 WHAT IS VALIDATION?

Once you have authored your Specification, it is compared against a ***Document Type Definition*** (***DTD***)--or more simply, it is ***validated***. A DTD used for validation is basically a checklist for information that must be provided in each structured document.

Validating checks that a structured document meets the following criteria:

- All child elements must match the structure prescribed by the USPTO
- All required elements are present

4.16.2 VALIDATION AS YOU AUTHOR

WordPerfect validates as you author your Specification. If you break the required structure yellow triangles appears in the ***XML Tree*** at the point where the error occurs. You can continue editing even if a yellow triangle appears.

4.16.3 VALIDATION WHEN COMPLETE

Use the following instructions to validate your document:

1. Click on the **Validate** button on the toolbar. The **Validation** window opens (see Figure 4-15).
2. Click the **Find Errors** radio button. Check all the check boxes in the **Error Types** section.

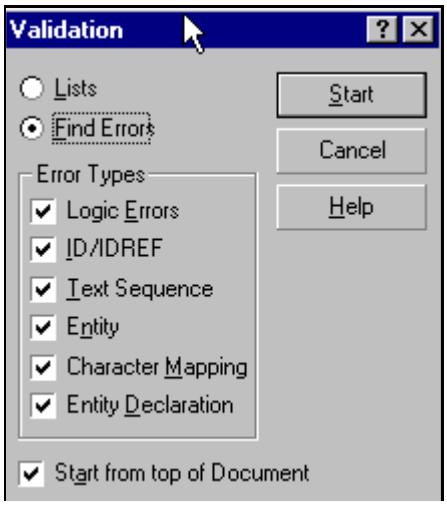


Figure 4-15 Validation Window

3. Click the **Start** button.
4. When an error is found, a message box explains the error and moves the cursor to the element which the error occurs. Correct the error (see Section 4.16.4) and then click on the **Next** button to view the next error.

4.16.4 CORRECTING VALIDATION ERRORS

Validation errors usually fall into three categories:

- An element is in an incorrect location
- A required child element is missing
- Text is located in location that does not allow text

Each error corresponds to a yellow triangle in the **XML Tree**. In most cases, if there are no yellow triangles in the XML tree you received no errors when validating.

The error found in Figure 4-16 occurs when an element is in an incorrect location. WordPerfect normally will not allow the insertion of an element if it makes the submission invalid. Thus, this error most often occurs when a parent element is deleted and the child element is left. Without the surrounding parent element, the child element becomes invalid. To fix this error, select any text or sub-elements that belong within the deleted parent element. With these items selected, insert the parent element double clicking on it in the **Elements** window or clicking the corresponding toolbar button.

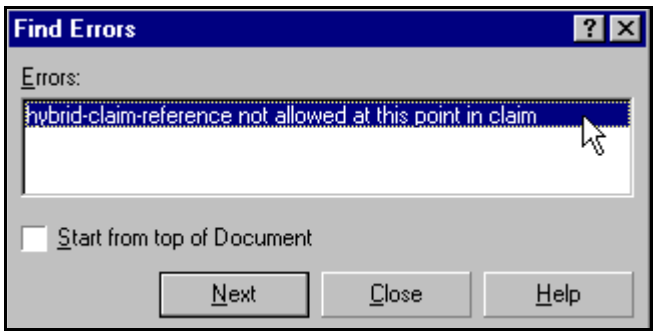


Figure 4-16 Element Not Allowed

The error found in Figure 4-17 occurs when a required child element (sub-element) has not been inserted. Click on the yellow triangle in the **XML Tree** where the error occurred. A list of required child elements appears. Click on the correct element.

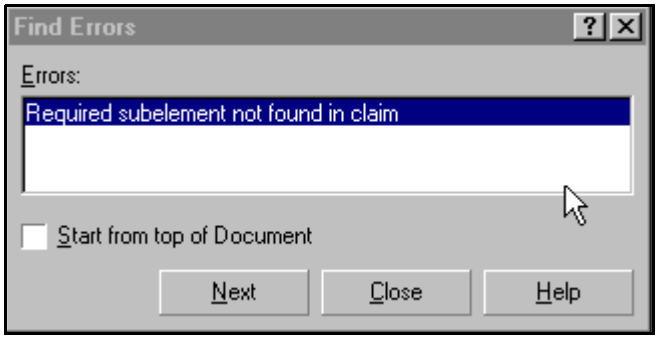


Figure 4-17 Required Element Not Found

The error found in Figure 4-18 occurs when text is entered in an element that does allow for text data. Usually you will have accidentally typed text in the element above or below the element that will allow for textual data. Select and then Cut (**CTRL + X**) and Paste (**CTRL + V**) the text

within the correct element. (You may find cutting and pasting easier using the **Display Codes** view.)

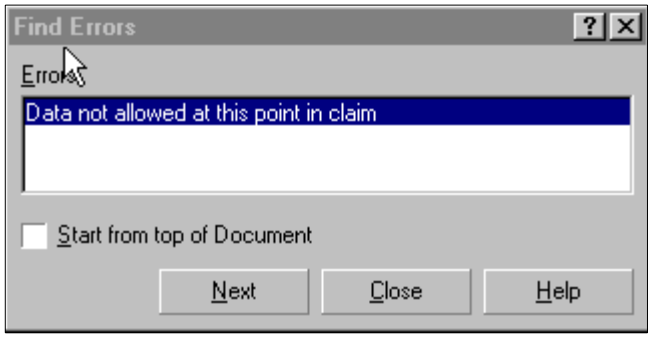


Figure 4-18 Data Not Allowed

4.17 COMMONLY USED ELEMENTS

The next sections contain instructions for inserting the most commonly used elements into your Specification documents.

Note: To access additional elements from the **Elements** window you may need to move beyond the end tag of the current element. You do this by double clicking on the ***End Tag*** for the current element in the Elements window. This is the first item in the list, it always begins with a </> and is then followed by the current element's name.

4.17.1 COPY AND PASTE TEXT

The following method will allow you to rapidly copy multiple pieces of text or paragraphs into the specification template, one piece/paragraph at a time. *Caveat: Each paragraph must be copied individually into a <paragraph> tag.* The current tool does not yet support retroactive tagging of paragraphs nor automatic conversion of WordPerfect paragraph tags into XML-compliant paragraph tags. All native WordPerfect formatting (i.e., formatting that is not added in the customized software) will be deleted upon saving the document. Follow these instructions to copy and paste:

1. Create the larger text portions of the Specification using WordPerfect, or convert text created with your current word processor to WordPerfect format.
2. Open the WordPerfect XML Specification template by clicking **File**, select **New from Project**, **EFS**, **Specification**, **Create.**
3. Open text file by clicking **File**, **Open**, and double-click on the appropriate file name.
4. To view the specification template and other documents in WordPerfect simultaneously, click **Window**, **Tile Top to Bottom** , or

   To alternate between the specification template and other documents in WordPerfect, click **Window,** and click the file you wish to view.

5. Copy **(CTRL+C)** and Paste **(CTRL+V)** text from your WordPerfect document into individual tags within the Specification template.

4.17.2 <APPLICATION-REFERENCE>

You use the <application-reference> element to tag and cite information about a related application; see MPEP 201.11, 608.01(a).

Note: To enter an <application-reference> element you must activate **Display Codes** first. Click the **Change XML Codes** button and from the drop-down menu select **Display Codes**.

Use the instructions below to insert an <application-reference> element:

1. Click on the **Application Reference** icon on the tool bar.
2. The **Application Reference** window opens.

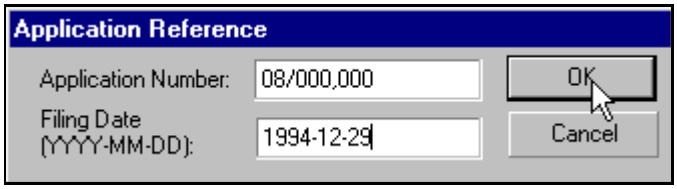


Figure 4-19 Application Reference Window

3. Type the application number in the **Application Number** field.
4. Optional Step: Entering a **Filing Date**. Type the date in the Filing Date field using the YYYY-MM-DD format indicated in Figure 4-19.
5. Click on the **OK** button.

4.17.3 <ARTWORK>

Use the <artwork> element, a child element of <figure>, to associate a 300 x 300 dpi TIFF file with your structured document. Use the instructions below to insert an <artwork> element:

1. From the **Elements** window insert the <artwork> element by double-clicking on it or click on the button on the toolbar.

Note: The <artwork> tags are hidden in the **Document Window** if **Show Codes** is active, but are present in the **XML Tree** and present when the XML document is created.

---

2. The **Insert Image** window opens. Browse through your files until you find the scanned TIFF image file. Select it and then click the **Insert** button. The graphic appears at the end of the document. (If the graphic or image does not appear, see Section 5.6.5.)

3. Select the graphic by clicking on it.
4. Right click on the graphic and select **Style** from the drop down menu.
5. Select **EFS box style**. This places the graphic in the correct position.
6. Click the **OK** button.

Warning: Do not move the inserted image by dragging as it causes the document to become invalid.

Note: After you complete the steps above you will find a yellow triangle is still visible in the ***XML Tree***. This triangle will be removed when you complete the step for finalizing the Specification in 4.15.

4.17.4 <CHEMISTRY-CWU>

The chemistry CWU is employed to enter chemical formulas in the body of the specification. At the time of publication of the guide, we were not able to prevent in-line images, such as the chemical complex work units described below, to print across pages boundaries upon rendering/ printing with the style sheet. Therefore, the authoring of chemical patents with in-line images (i.e., figures in the body of the specification and in claims) is discouraged for the purposes of this pilot program. We are working as hard as possible to correct this deficiency.

It does appear possible to force online images, such as chemical formulas, in the <chemistry CWU> tag to print on a new page when otherwise split across pages by adding empty paragraph tags. However, it is expected that users will not want to go through this labor-intensive process in order to author a chemical specification until this is more automated. Users are invited to make suggestions regarding this situation.

Insert a <chemistry-cwu> element in your structured document as follows:

1. Double click on the <chemistry-cwu> element in the **Elements** window to insert it.
2. An ID number appears (a “y” followed by a number).
3. From the **Elements** window insert the <image> element by double clicking on it.
4. The **Insert Image** window opens. Browse through your files until you find the scanned TIFF image file. Select it and then click the **Insert** button. The graphic appears at the end of the document. (If the graphic or image does not appear, see Section 5.6.5.)
5. Select the graphic by clicking on it.
6. Right click on the graphic and select **Style** from the drop down menu.
7. Select **EFS box style**. This places the graphic in the correct position.

Note: After you complete the steps above you will find a yellow triangle is still visible in the ***XML Tree***. This triangle will be removed when you complete the step for finalizing the Specification in 4.15.

Warning: Do not move the inserted image by dragging as it causes the document to become invalid.

4.17.5 <COPYRIGHT>

The <copyright> element is an optional child element of the <copyright-statement> and <figure> elements. Use the following procedure to insert a <copyright> element in your structured document.

1. Insert the <copyright> element by double clicking on it in the **Elements** window. A [Copyright] label appears.
2. Type the copyright date next to the label.

4.17.6 <CUSTOM-CHARACTER>

The <custom-character> element is used to attach a custom character, such as a symbol.

1. From the **Elements** window, insert the <custom-character> element by double-clicking on it. The **Insert Image** window opens.
2. Browse through your files until you find the scanned TIFF image file. Select it and then click the **Insert** button. The graphic appears at the end of the document. (If the graphic or image does not appear, see Section 5.6.5.)
3. Select the graphic by clicking on it.
4. Right click on the graphic and select **Style** from the drop down menu.
5. Select **EFS box style**. This places the graphic in the correct position.

Warning: Do not move the inserted image by dragging as it causes the document to become invalid.

Note: After you complete the steps above you will find a yellow triangle is still visible in the ***XML Tree***. This triangle will be removed when you complete the step for finalizing the Specification in 4.15.

4.17.7 <EMPHASIS>

In this WordPerfect template, the <emphasis> element emphasizes text by italicizing it. Insert an <emphasis> element using two methods:

Method 1:

1. When finished typing your paragraph, select the text you want to emphasize.
2. From the **Elements** window, insert <emphasis> double clicking or it or click the **Emphasis** button on the toolbar.

or:

Method 2:

1. While typing your paragraph, go to the **Elements** window, insert <emphasis> by double clicking on it or click the **Emphasis** button on the toolbar.
2. Type in text to be emphasized.
3. To return to the paragraph you were typing in, double click on the <emphasis> element end tag in the Elements window.

4.17.8 <HEADING>

The <heading> element is an element usually available for insertion immediately after a major section of the Specification, for example, <background-of-invention>. It increases the point size of your text and gives the text a bold font. It is usually inserted simultaneously along with the <section> element.

Note: For headings in the major sections of the Specification, there is default text in the template, derived from the MPEP. One example is "Default Description of the Several Views of the Drawings." The default heading text may be changed.

To insert a <heading> element:

1. Insert the <heading> element by double clicking on it in the **Elements** window or click the **Heading** button on the toolbar.
2. Type the needed heading.

4.17.9 <LIST> AND <LIST-ITEM>

The <list> element allows you to insert a list of items into a <paragraph> element.

1. In the **Elements** window, double click on <list> to insert the element or click the **List** button on the toolbar. An ID number appears (the letter "l" plus the list number).

2. To add the first item in the list, insert the <list-item> element from the **Elements** window by double clicking on in or click the **List Item** button on the toolbar. The [Item] label appears.
3. Insert the <paragraph> element. Type the item in your list.
4. To create additional items in the list:

   4a. Move to the end tag for the <paragraph> element by double clicking on it in the **Elements** window.

   4b. Insert the end tag for the <list-item> element.

   4c. Repeat steps 3-4c as needed.
5. Optional Step for Sub-lists: To create <list-item> elements that are nested within <list-item> element: Insert the <list-item> element after you insert the parent <list-item> element.

Note: Lists are formatted to indent up to five levels.

4.17.10 <MATH-CWU>

At the time of publication of this guide, we have not been able to prevent mathematical formulas from rendering/ printing across page boundaries in all circumstances. The use of applications with numerous mathematical formulas is therefore discouraged. In the unlikely event that a specification with minimal mathematical formulas renders across page boundaries, it appears possible to force the formula to a new page with empty <paragraph> tags. Mathematical formulas, because of their minimal height, are unlikely to be split across page boundaries. We are working to improve this situation, and are open to suggestions regarding this matter.

The <math-cwu> element offers two methods for providing mathematical formulas. The first is to scan the formula and attach it using the <image> element. In addition, you may enter the formula directly into your structured submission and tag each part of the formula using MathML elements. This method is recommended for expert users familiar in MathML as the USPTO does not provide instructions or software for using and rendering MathML. The following Website provides an excellent overview of MathML: http://www.w3.org/TR/REC-MathML.html. (This URL is case sensitive.) The instructions below cover both methods.

Note: The <math-cwu> element may appear within <paragraph> elements or between them.

---

1. Insert the <math-cwu> element in the **Elements** by double clicking on it or click the Math-CWU button on the toolbar.
2. An ID number appears (an “m” followed by a number). The <image> and <math> elements appear in the **Elements** window.

3. To use the <image> element (recommended method):

   3a. Insert the <image> element by double clicking on it.

   3b. The **Insert Image** window opens. Browse through your files until you find the scanned TIFF image file. Select it and then click the **Insert** button. (If the graphic or image does not appear, see Section 5.6.5.)

   3c. Select the graphic by clicking on it.

   3d. Right click on the graphic and select **Style** from the drop down menu.

   3e. Select **EFS box style**. This places the graphic in the correct position.

Warning: Do not move the inserted image by dragging as it causes the document to become invalid.

Note: After you complete the steps above you will find a yellow triangle is still visible in the ***XML Tree***. This triangle will be removed when you complete the step for finalizing the Specification in 4.15.

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4. To use the <math> element (advanced user method):

   4a. Insert the <math> element by double clicking on it. Numerous MathML elements appear in the **Elements** window.

   4b. Using the keyboard type your formula and tag each section appropriately.

4.17.11 <PARAGRAPH>

1. Double click on the <paragraph> element in the **Elements** window or click the **Paragraph** button on the toolbar. 
2. Click to the right of the [p] label and type or insert the paragraph.
3. Once you finish typing your data into a paragraph and you wish to begin another paragraph move outside the current paragraph by double clicking on end tag in the **Elements** window. Then insert the next <paragraph> element. If you use the **Paragraph** button to insert a second paragraph you need not move to the end tag. This is done for you automatically.
4. To tag multiple paragraphs:

   4a. Insert the first <paragraph> element using the Elements window or by clicking on the Paragraph button ton the toolbar.

   4b. Click to the right of the [p] label and type or insert the text.

   4c. Move the cursor to the end of the inserted text and insert a new <paragraph> element.

   4d. Select and drag a paragraph to the right of the new [p] label.

   4e. Repeat step 4c-d as needed for each paragraph to be tagged.

5. To insert a blank line after a <paragraph> element, or between lines of text, press SHIFT ENTER.

4.17.12 <PATENT-REFERENCE>

When referring to a patent, use its patent number. You must tag these references using the <patent-reference> element. Use either of the methods below:

1. Double-click on the <patent-reference> element in the **Elements** window to insert it or click the **Patent Reference** button on the toolbar. A [Patent Number] label appears.
2. Click next to the label and type the patent number. It appears underlined. To move out of the <patent-reference> element, double click on the <patent-reference> end tag in the Elements window.

   -or-

1. Type the patent number.
2. Select it.
3. Double click on the <patent-reference> element in the **Elements** window or click the **Patent Reference** button on the toolbar. The [Patent Reference] label appears and the the selected data is underlined.

4.17.13 <SECTION>

The <section> tag inserts a new section into your structured document. You do not type any data in this element. Instructions follow:

1. From the **Elements** window, double click on the <section> element to insert it or click the **Section** button on the toolbar.
2. This element requires a <heading> element. See Section 4.17.8.

4.17.14 <SUBSCRIPT>

The <subscript> element is used to format text as a subscript. Use the following procedure to insert the <subscript> element:

1. Type the subscript number.
2. Select the text.
3. Double click on the <subscript> element in the **Elements** window or click the **Subscript** button on the toolbar. The selected text appears as a superscript.

4.17.15 <SUPERSCRIPT>

The <superscript> element is used to format text as a superscript. Use the following procedure to insert the <superscript> element:

1. Type the superscript number.
2. Select the text.
3. Double click on the <superscript> element in the **Elements** window or click the **Superscript** button on the toolbar. The selected text appears as a superscript.

Note: The <superscript> element cannot be used to create footnotes as the WordPerfect Specification template was not designed to support footnote formatting.

4.17.16 INSERTING IMAGES AND DRAWINGS WITHIN THE SPECIFICATION

Using the following elements, you may insert a TIFF image into your Specification document.

- When inserting the <image> element, after having inserted one of the following elements: <chemistry-cwu>, <math-cwu>, and <table-cwu>
- <custom-character>
- <artwork>

In order for the graphic images to appear, you must ensure the **Auto Insert** feature is active. Use the following instructions to activate this feature:

1. From the **Insert** menu select **Elements**.
2. The **Elements** window opens.
3. If the **Auto-Insert** checkbox is not checked, do so now.

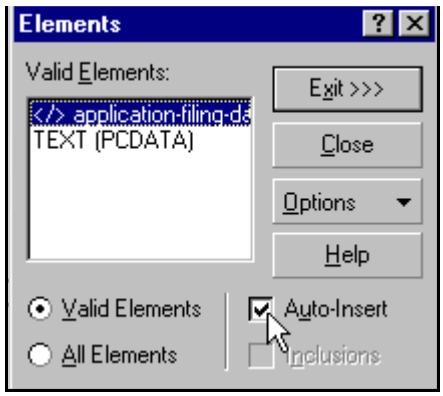

Figure 4-20 Ensure That Auto-Insert is Checked

Use the following instructions to insert the scanned image (if you have not already scanned and saved the image in TIFF format, do so now).

1. Insert one of the elements listed at the beginning of this section (<artwork>, <image> or <custom-character>). From the **Elements** window, insert the needed element by double clicking on it or click on the corresponding toolbar button.
2. The **Insert Image** window appears. Browse to locate the TIFF file.

3. Click on the file name to select and then click on the **Insert** button.
4. Select the graphic by clicking on it.
5. Right click on the graphic and select **Style** from the drop down menu.
6. Select **EFS box style**. This places the graphic in the correct position.

Warning: Do not move the inserted image by dragging as it causes the document to become invalid.

Note: After you complete the steps above you will find a yellow triangle is still visible in the ***XML Tree***. This triangle will be removed when you complete the step for finalizing the Specification in Section 4.15.

4.17.17 <TABLE>

You can insert a table into a Specification using three methods. The first allows you to use WordPerfect's Table Authoring interface and then convert the table to XML. The second allows you to scan an image of a table and insert the image into the document. This second method is especially useful for highly formatted and complicated tables that would be either too time consuming or are not supported with the WordPerfect tool. Method three may be used to copy and paste text from another WordPerfect document.

Note: Tables may appear within <paragraph> elements or between them. If you are within a paragraph and would like to insert a table so that it appears above the paragraph you need move the cursor so that it is before the number ID, e.g., [p1], [p3]. The easiest method for accomplishing this is to press the **HOME** key.

---

1. Click on the **Table** button on the toolbar to insert the <table-cwu> element. 
2. The <table> and <image> elements appear in the **Elements** window.
3. Use one of the two methods described below to complete the table.

Method 1: Use WordPerfect to Create a Table

WordPerfect provides numerous features for creating tables; however, WordPerfect cannot convert all these features to XML. Only use features which adjust the height, width and number of cells. The following guidelines will assist you in deciding which features to use and which to avoid.

- You *may* split and join cells.
- You *may* add and remove rows or columns.

- You *may* adjust the alignment of text within individual cells or entire columns.
- You may *not* adjust the internal ruling of the cells, rows or columns.
- You may *not* skew or rotate cells or text within cells.
- You may *not* add fills, gradients or patterns.
- You may *not* use the WordPerfect-provided calculation tools to manipulate the data within the cells.

For instructions regarding those features that you may use when creating your table, consult the online WordPerfect Help by selecting **Help Topics** from the **Help** menu. Within the **Contents** tab click on the **Using tables and charts** entry.

Instructions for inserting a table follow.

1. Click on the **Insert Table** button. (This button is located to the right of the **Table** button you clicked in Step 1 above.) The **Create Table** window opens.
2. Ensure that the **Table** radio button is selected.
3. In the **Columns** and **Rows** fields type the number needed of each.
4. Click on the **Create** button. The number of specified rows and columns appear. Click in each cell and type your data.
5. To insert a Table Heading:

   5a. In the XML Tree, click below the <heading> element, so the blue triangle appears to the left

   5b. Type in the table heading.

Once you have completed the table, convert it to XML using the following instructions.

1. From the **XML** menu select **Tag Tables**.
2. The **Tagging Tables** message box appears (see Figure 4-21).

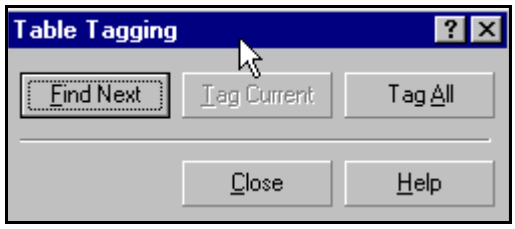

Figure 4-21 Table Tagging Message Box

3. Click the Tag All button.
4. Click the **Close** button.

Note: Tables may appear slightly different when converted and viewed in their XML format (via a browser) than that seen in the WordPerfect format. This *does not* affect the data contained within them.

Method 2: Insert a Scanned Image of a Table

1. Scan the table at 300 x 300 dpi and save in TIFF format.
2. Insert the <image> element by double clicking on it in the **Elements** window.
3. The **Insert Image** window opens.
4. Browse through your files until you find the scanned TIFF image file. Select it and then click the **Insert** button. (If the graphic or image does not appear, see Section 5.6.5.)
5. Select the graphic by clicking on it.
6. Right click on the graphic and select **Style** from the drop down menu.
7. Select **EFS box style**. This places the graphic in the correct position.

Warning: Do not move the inserted image by dragging as it causes the document to become invalid.

Note: After you complete the steps above you will find a yellow triangle is still visible in the ***XML Tree***. This triangle will be removed when you complete the step for finalizing the Specification in 4.15.

Method 3: Copy and Paste a Table

The following method will allow you to rapidly copy tables into the Specification template, one table at a time. *Caveat: Each table must be copied individually into a <table-cwu> tag.*

1. Create the table for the Specification using WordPerfect, or convert a table created with your current word processor to WordPerfect format.
2. Open the WordPerfect XML Specification template by clicking **File**, select **New from Project**, **EFS**, **Specification**, **Create.**
3. Open the table file by clicking **File**, **Open**, and double-click the file name.
4. To view the specification template and other documents in WordPerfect simultaneously, click **Window**, **Tile Top to Bottom** , or

   To alternate between the specification template and other documents in WordPerfect, click **Window,** and click the file you wish to view.

5. Select and Copy **(CTRL+C)** the table from your WordPerfect document.
6. Insert the Table-CWU tag at the desired location in the Specification template.

7. Paste **(CTRL+V)** the table into the Table-CWU element.
8. Tag the table: **XML**, **Tag Tables**, **Tag All**, **Close**.
9. Without moving the cursor within the new table, insert the Heading tag using the drop-down list, and type in the table title.

5 ELEMENT LIST AND DESCRIPTION

5.1 GENERIC ELEMENTS

<artwork>	Child element of <figure> element, with which a TIFF file is associated. It may contain one or more <drawing-reference-characters> child element(s).
<chemistry-cwu>	Empty element with an entity reference that points to a scanned chemistry image.
<colspec>	Empty element that specifies the formatting characteristics of a column (e.g., width, alignment) in a table CWU (Complex Work Unit). This element is nested in the <tgroup> element (which itself is a child of the <table> element.
<custom-character>	Element that references a custom character. This element allows applicants to make up their own symbols that are not present in any existing character set.
<emphasis>	Formatting element that marks words or phrases that are stressed or emphasized for linguistic or rhetorical effect.
<entry>	This element contains a cell in a table CWU (Complex Work Unit) and marks the contents of a table cell.
<heading>	Element associated with parent elements (such as section, table, summary of invention, etc.) that contains a heading or title (#PCDATA). >
<illustration>	Element associated with an external graphics entity to illustrate or provide emphasis for rhetorical effect.
<list>	Element that contains any sequence of items (i.e., contains child element <list-item>).
<list-item>	Item in a list. You must insert a <paragraph> to type data in the <list-item>.
<paragraph>	Element that marks a paragraph in prose.
<paragraph-claim>	This element contains a paragraph that has a claim content model.
<section>	This element creates a section.
<sequence-cwu>	This element is used to tag DNA sequences and is usually found as a child element of the <paragraph> element.
<subscript>	This is a formatting element that places character(s) below the baseline.

<superscript>	This is a formatting element that places character(s) above the baseline.
<table>	This is the parent element of the <table-cwu> element.
<table-cwu>	This element contains text displayed in a tabular format, in row and columns.
<tbody>	This element contains table body content.
<thead>	This element contains table title content.

5.2 USPTO CUSTOMIZED TOOLBAR

The USPTO has created a custom tool bar to assist you in inserting elements into the Specification (see Figure 5-1). The table presented indicates the element each button inserts.

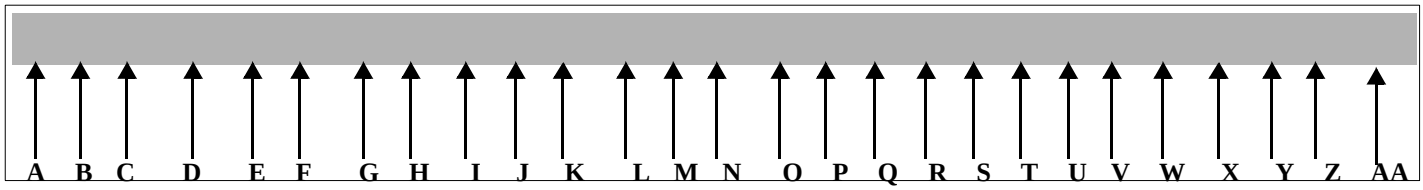

Figure 5-1 EFS Specification Toolbar

Table 1: Toolbar Buttons

Buttons Listed by Position on Toolbar	Buttons Sorted by Element Name
A - <paragraph>	<application-reference> - R
B - <list>	<artwork> - I
C - <list-item>	<chemistry-cwu> - M
D - <not-applicable>	<claim> - T
E - <heading>	<claim-step> - U
F - <section>	<cross-reference> - Q
G - Remove Figures	<dependent-claim-reference> - X
H - <figure>	<emphasis> - N
I - <artwork>	<figure> - H
J - <table-cwu>	<heading> - E
K - <table>	<hybrid-claim-reference> - Y
L - <math-cwu>	<list> - B
M - <chemistry-cwu>	<list-item> - C
N - <emphasis>	<math-cwu> - L
O - <superscript>	<not-applicable> - D
P - <subscript>	<paragraph> - A
Q - <cross-reference>	<paragraph-claim> - V
R - <application-reference>	<parent> - Z
S - <patent-reference>	<patent-reference> - S
T - <claim>	<preamble-claim> - W
U - <claim-step>	Remove Figures - G
V - <paragraph-claim>	<section> - F
W - <preamble-claim>	<subscript> - P
X - <dependant-claim-reference>	<super-script> - O
Y - <hybrid-claim-reference>	<table> - K
Z - <parent>	<table-cwu> - J
AA - Jump to a cross reference by selecting the cross reference number while within <cross-reference> element.	

5.3 METHODS FOR INSERTING ELEMENTS

Method 1: Right Click Within the Document Window

Use the following instructions to insert an element from within the **Document Window**.

1. In the ***Document Window,*** position the cursor at the point where the element is to be inserted.
2. Right click within the Document Window and from the menu select **Valid Elements**. A submenu appears listing all valid elements for the area in which you clicked. (If no elements appear then there are no valid elements to insert, given the current position of the cursor.)
3. Click the needed element in the submenu to insert it (see Figure 5-2).
4. To insert a blank line after an element, press SHIFT ENTER.

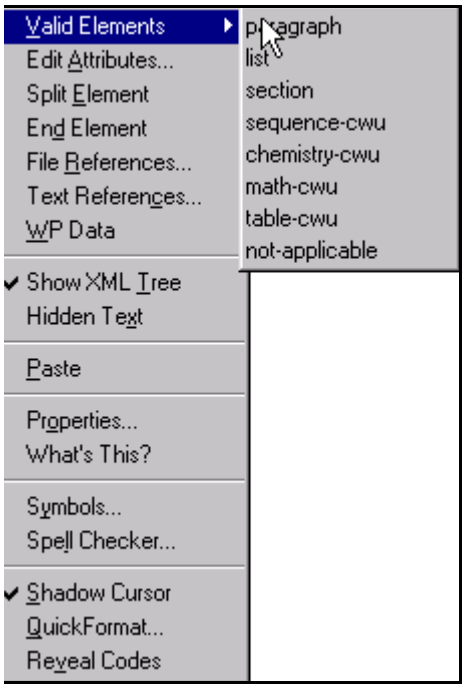

Figure 5-2 Right Click and Insert Element

Method 2: Using the Valid Elements Drop Down List

WordPerfect's default toolbar contains a **Valid Elements** drop down list that details all available elements, given the cursor's current position. A valid element is any element that may be inserted into the document without violating the DTD developed by the USPTO. For example, the <table-cwu> element is valid within the <paragraph> element but not valid within the <figure> element.

1. Click on the arrow for the drop down list.

2. Choose an element from the list by clicking on it (see Figure 5-3).

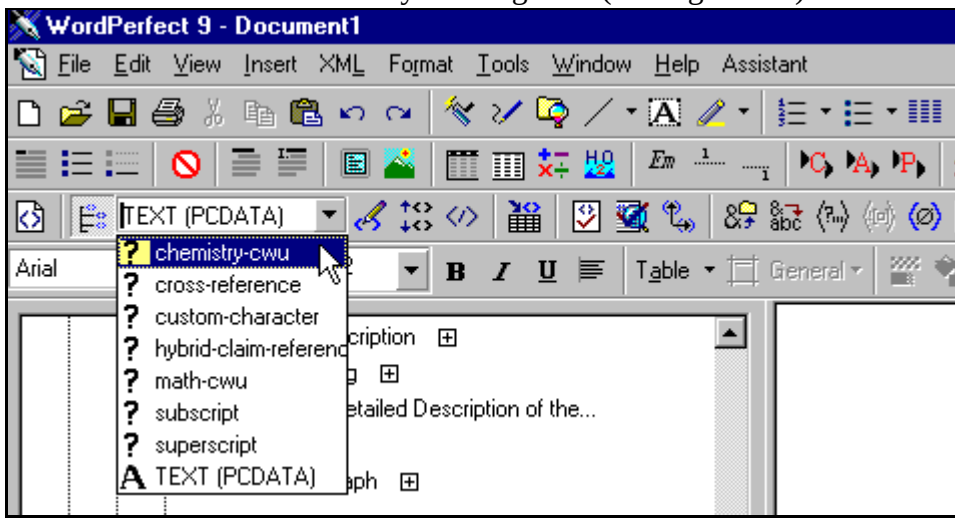

Figure 5-3 Element Drop Down List

In Figure 5-3, all of the available elements are preceded by a question mark. This indicates that the element is optional.

In Figure 5-4, the bar preceding the elements indicates that *one* of the listed elements must be entered for the Specification to be valid.

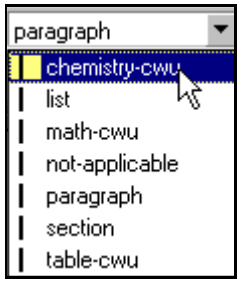

Figure 5-4 One Element from List is Required

Occasionally, the drop down list will contain elements preceded by bars and question marks. This indicates that one of the bar items is required but you may also insert any of the optional elements.

Method 3: Using the Toolbar

The USPTO has a toolbar to assist you in inserting elements while authoring. Ensure that your cursor is in the desired position within the Document Window. Click on the button on the toolbar that corresponds to the element you wish to insert. Refer to Section 5.2 for an overview of the specific buttons on the toolbar.

Method 4: Clicking on the Yellow Triangle

When a required element is missing, a yellow triangle appears in the **XML Tree** to indicate a validation error. Click on the triangle and a list of available elements appears (see Figure 5-5). Click on an element to insert it.

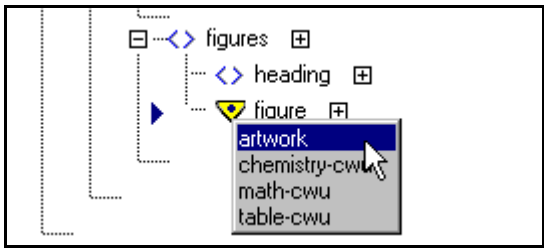

Figure 5-5 Insert a Missing Required Element

5.4 ASSISTANT MENU

The USPTO has designed an **Assistant** menu that contains several functions for formatting and preparing the completed Specification for submission.

5.4.1 NUMBERING

Before you submit your Specification you need to ensure that all items are numbered in the proper order. Items number as you insert them, regardless of their order within the Specification. If you enter a paragraph near the end of the document and then later enter one near the beginning, the numbers will be incorrectly ordered.

For frequently entered elements, the ID number can be a letter-number combination, for example:

- <artwork>: a1, a2, a3, etc.
- <chemistry>: y1, y2, y3, etc.
- <claim>: c1, c2, c3, etc.
- <figure>: f1, f2, f3, etc.0
- <heading>: h1, h2, h3, etc.
- <list>: l1, l2, l3, etc.
- <math>: m1, m2, m3, etc.
- <paragraph>: p1, p2, p3, etc.
- <section>: s1, s2, s3, etc.
- <sequence>: q1, q2, q3, etc.
- <table>: t1, t2, t3, etc.

Note: Do not attempt to manually renumber the elements listed above as you will use the WordPerfect tool to automatically re-number all of these items.

Use the following instructions to renumber items in your Specification:

1. Click on **Assistant** on the menu bar.
2. Hold your cursor over the **Numbering** option. A new menu appears.
3. Select the item you wish to renumber or select **Renumber all** (see Figure 5-6).

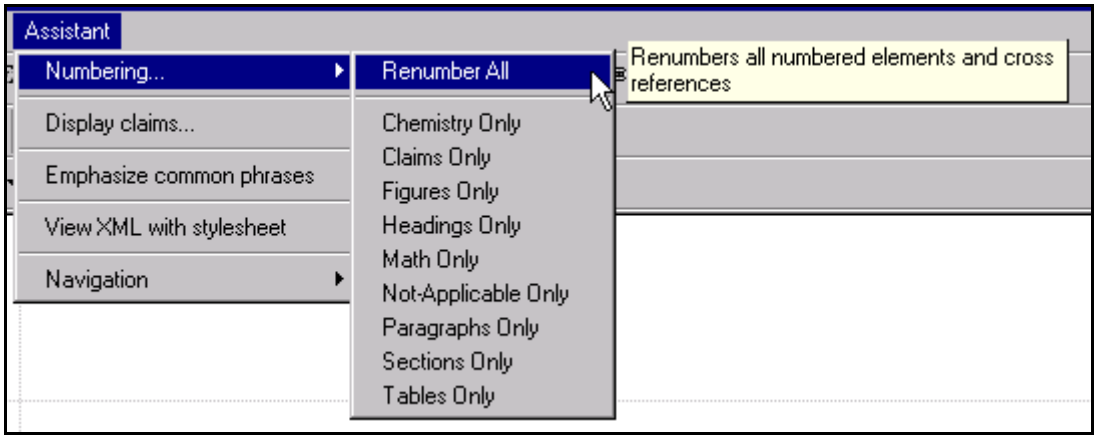

Figure 5-6 Renumbering Menu

5.4.2 DISPLAY CLAIMS

This option counts the claims in the document and displays the number of dependant and independent claims. This option also updates the capitalization of all cross references so that they are consistent throughout the Specification.

1. From the **Assistant** menu select **Display claims**. The **Update cross-references** window opens.

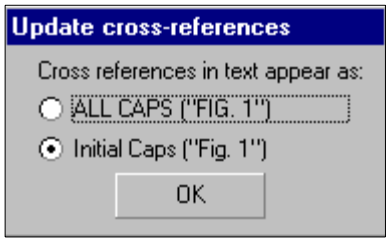

Figure 5-7 Update Cross References

2. Click on either the **ALL CAPS** or **Initial Caps** radio button. This updates all your cross references so that they have one consistent format in text.
3. Click the **OK** button. All cross-references are updated and all claims are counted.

4. A message box appears for each dependent claim. The message box details the dependent claim, and the claim on which it is dependant (see Figure 5-8).

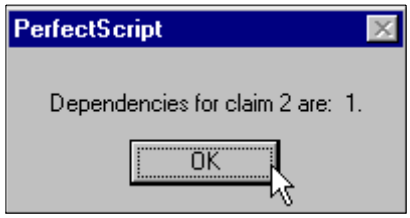

Figure 5-8 Dependencies Message Box

5. Click the **OK** button for each **Dependencies** message box that appears.
6. The last message box totals all dependent and independent claims and lists the claim numbers for each type (see Figure 5-9).

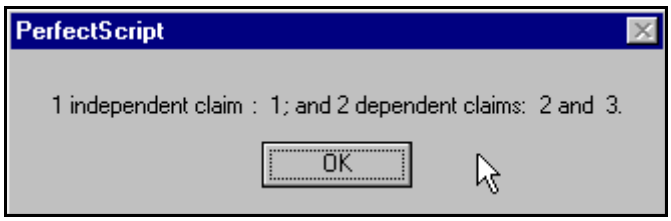

Figure 5-9 Total Independent and Dependent Claims

Warning: The number of independent and dependant claims will be correct only if you properly tagged each dependant claim.

7. Click the **OK** button.

5.4.3 EMPHASIZE COMMON PHRASES

This option adds the <emphasis> element (to italicize) to many common phrases. A list of the phrases follows:

- *a fortiori*
- *a posteriori*
- *a priori*
- *ab initio*
- *ad hoc*
- *cf.*
- *e.g.*
- *et al.*
- *etc.*
- *i.e.*
- *in vitro*
- *in vivo*
- *infra*
- *inter alia*
- *per se*
- *prima facie*
- *q.v.*
- *supra*

5.4.4 VIEW XML WITH STYLESHEET

After ***Validating*** your document (Section 4.13), you need to view it as an XML document using Internet Explorer 5 or any other browser that can interpret well-formed XML and can format it using a stylesheet. You must view the XML version of your Specification as this will display what the Examiner sees when viewing your submission. ***Before doing so, you must save your document as XML?***

1. Validate the document (see Section 4.16).
2. Save the document by selecting **Save** from the **File** menu, ensuring that the file format is **WordPerfect 6/7/8/9**.

3. From the **File** menu select **Save As**. The **Save As** window appears (see Figure 5-10).

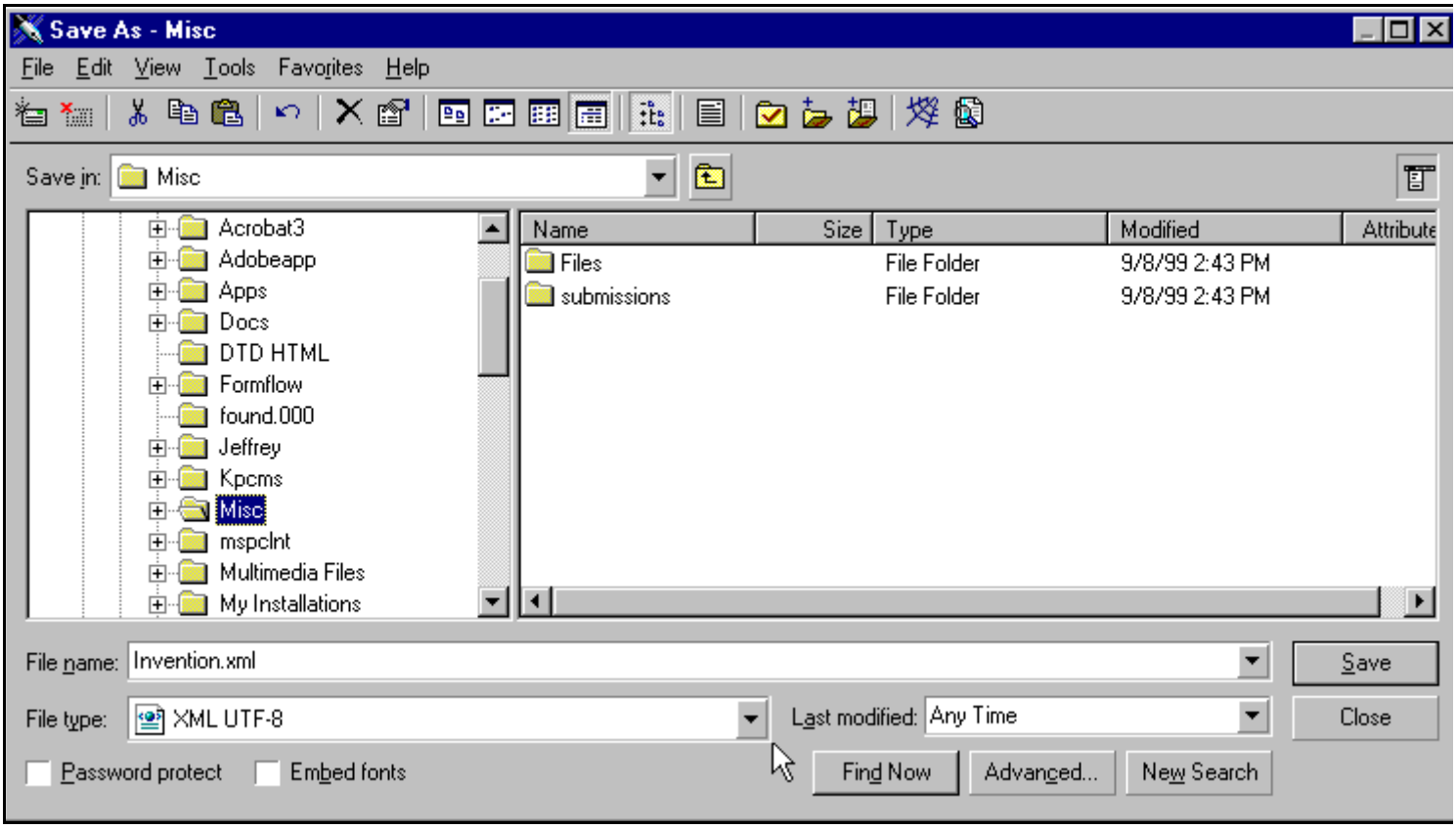

Figure 5-10 Save As Window

4. In the **File name** field type the name of the file you just saved as a WordPerfect file. Add the extension **.xml** to the end of the file's name to create an XML file.
5. Click the down arrow in the **File type** field. From the drop down menu select the **XML UTF-8**.
6. Click on the **Save** button. The current file is now an XML file.
7. Close the file by selecting **Close** from the **File** menu. You should have *no* files open now.
8. Open the .WPD file you created in Step 2. When the initialization prompt appears click on the **OK** button.

9. From the **Assistant** menu select the **View XML with Style Sheet** option. The **Display with stylesheet** window opens (see Figure 5-11).

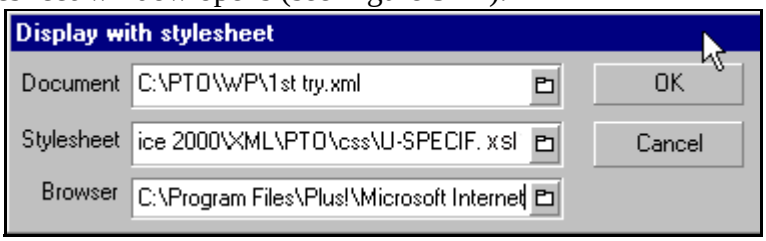

Figure 5-11 Viewing Specification as an XML File

10. In the **Document** field, click on the folder icon. A file browsing window appears.
11. Find and select the .XML file you created in step 4.

Note: In Step 11, ensure that you select the XML file and not the WPD file. Both files have the same name but different file extensions.

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12. Click the **Open** button.
13. In the **Stylesheet** field, click on the folder icon. A file browsing window appears.
14. Select the file, **U-specif.xsl**. Click on the **Open** button.
15. In the **Document** field, click on the folder icon. A file browsing window appears.
16. Find and select the .XML file you created in step 4.
17. In the **Browser** field, click on the folder icon. A file browsing window appears.
18. Select **IExplorer** or any other compatible browser (one that is XML compliant). Click on the **Open** button.
19. Click on the **OK** button. Your document appears in your browser's window as the USPTO examiner will see it.

Note: Tables may appear slightly different when converted and viewed in their XML format from that seen in the WordPerfect format. This *does not* affect the data contained within them.

5.4.5 NAVIGATION

See Section 3.2.1, Definition of an Element and Its Associated Tag, for navigation information.

5.5 HELP

This section describes the various help functions associated with using Word Perfect to author a Specification. WordPerfect Authoring Tool Help is provided either through this guide or through the WordPerfect Online Help functions.

5.5.1 ONLINE HELP

WordPerfect provides two types of online help: ToolTips, WordPerfect Help.

ToolTips

ToolTips provide a brief description of various fields and buttons available while authoring your electronic submissions. The USPTO has created a customized toolbar within WordPerfect to help you quickly accomplish common tasks. ToolTips provide a useful method of investigating the task performed by the buttons found on these toolbars. To activate a ToolTip, hold the mouse cursor over a button (do not click) and a ToolTip appears. ToolTips for the customized toolbar buttons also contain the shortcut key combination associated with the toolbar button. You can also allow your mouse to hover over any yellow triangles that appear in the ***XML Tree***. A ToolTip appears describing the error.

WordPerfect Help

You may access WordPerfect Help by clicking on **Help** on the menu bar and then clicking on **Help Topics** (or press **F1**). This brings up WordPerfect's online help system. There are five tabbed sections that you may use. A description for each Help Tab follows.

- **Contents**—Provides help information by nested topics. Click on topics and then click on sub-topics until you reach the desired information.
- **Index**—Provides help by keyword. Type a word in the first field and select topics from those that appear in the second field.
- **Find**—Similar to the Index tab but provides more comprehensive search capabilities.
- **Ask The Perfect Expert**—In the first field type your question or search term. Then click on the **Search** button. Topics appear in the second window, select the topic and click on the **Display** button.
- **Corel Knowledge Base**—Type a search term in the field and then click on the **Search** button. This searches the Online Corel Database, via the World Wide Web (WWW), for information.

Note: Online WordPerfect Help has not been customized to reflect any changes the USPTO made to the program interface. Thus some functions or elements described in the online Help may function or appear differently in your customized version of WordPerfect.

5.6 TROUBLESHOOTING

This section contain general troubleshooting information and specific solutions to problems that may arise during the authoring process.

5.6.1 USING UNDO TO CORRECT AN ERROR

Undo is a Windows command present in WordPerfect that provides valuable error-correcting capabilities when authoring a Specification. **Undo** permits you to cancel previous actions prior to saving your structured document. Once you perform a **Save** function, the **Undo** function becomes inactive until you resume working on your structured document. There are three ways to use the **Undo** function:

- Keyboard shortcut command **CTRL-Z**
- From the **Edit** menu, select **Undo**, or
- On toolbar, click the **Undo** button.

5.6.2 USING REDO TO CORRECT AN ERROR

You can use the **Redo** command to restore any element, data, or attribute value that you may have mistakenly deleted while using the **Undo** function. The **Redo** function does not allow you to repeat the insertion of an element. Once you save your document, the **Redo** command button becomes inactive until you use the **Undo** command. There are three ways to use the **Redo** function:

- Keyboard shortcut command **CTRL+SHIFT+R**
- From the **Edit** menu, select **Redo**, or
- On **Standard** toolbar, click on the **Redo** button.

5.6.3 TROUBLESHOOTING: APPLICATION CLOSES BEFORE DATA IS SAVED

In the event that your computer or application closes before you can save, you may revert to the last auto-save copy. After re-opening WordPerfect, the message box in Figure 5-12 appears. Choose the desired option. To change your auto save feature so WordPerfect

automatically saves files more often, click **Settings** on the **Tools** menu. Click the **Files** button and then select the **Document** tab.

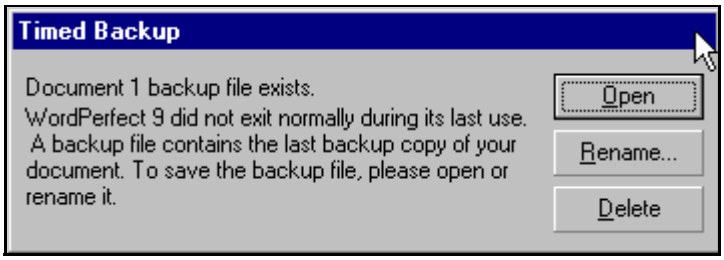

Figure 5-12 Timed Backup Message Box

5.6.4 TROUBLESHOOTING: DELETING MULTIPLE REQUIRED ELEMENTS

You may find that when trying to delete text, you accidentally delete elements. Yellow triangles indicating a validation error appear in the XML tree. The efficient method for correcting this error is to use the **Undo** feature. Select **Undo** from the **Edit** menu. WordPerfect supports multiple undos.

5.6.5 TROUBLESHOOTING: GRAPHICS DO NOT APPEAR

In order for the graphic images to appear, you must ensure the **Auto Insert** feature is active. Use the following instructions to activate this feature:

1. From the **Insert** menu select **Elements**.
2. The **Elements** window opens.
3. If the **Auto-Insert** checkbox is not checked, do so now.

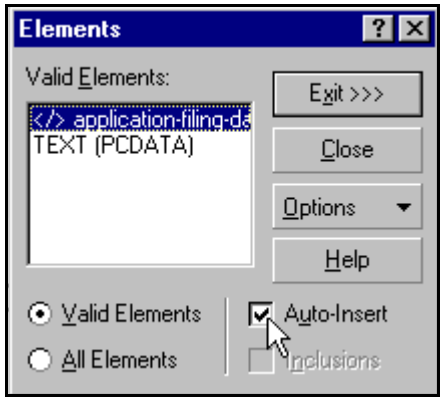

Figure 5-13 Ensure That Auto-Insert is Checked

4. Click the **Close** button.

5.6.6 TROUBLESHOOTING: ERRORS ATTEMPTING TO VIEW AS XML

You may receive the error shown in Figure 5-14 when trying to view the Specification in XML format.

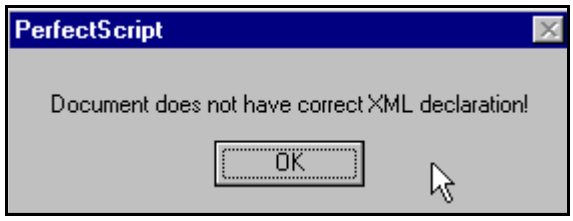

Figure 5-14 Error Viewing as XML

This error occurs when you select the .WPD file instead of the .XML file for the **Document** field of the **Display with stylesheet** window (Step 16. in Section 5.4.4).

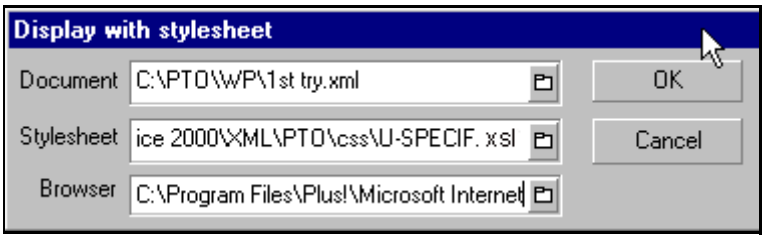

Figure 5-15 Display with Stylesheet Window

Click the **OK** button in the error box. A read-only version of your WPD file opens. Close this file. You return to your original WPD file. Repeat the steps in Section 5.4.4.

5.6.7 TROUBLESHOOTING: WORDPERFECT-SPECIFIC KEYBOARD SHORTCUTS FAIL

The USPTO has created numerous shortcut key combinations which correspond to the actions found on the EFS Specification Toolbar. These keyboard combinations are the default combinations loaded when you open the Specification template. To activate the WordPerfect specific combinations, you must de-activate the Specification combinations. Use the following instructions:

1. Click on **Tools** on the menu bar.
2. From the drop down menu, select **Settings** and then click on the **Customize** button.
3. Click the **Keyboard** tab.
4. Select **WPWin 9 Keyboard** from the list.

5.7 REQUIREMENTS FOR SUBMITTING TIFF IMAGES

Drawings, tables, math formulas or chemical formula diagrams that are to be part of the Specification submission must be scanned at 300 x 300 dpi resolution and saved in the TIFF file

format. Only one, black and white figure per page is permissible. The maximum size is 21.6 cm by 27.9 cm (8 1/2 by 11 inches, 2550 by 3300 pixels). When printed, 21.6 cm by 27.9 cm (8 1/2 by 11 inch) drawing images must include:

a top margin of at least 2.5 cm (1 inch)
a left side margin of at least 2.5 cm (1 inch)
a right side margin of at least 1l5 cm (5/8 inch)
a bottom margin of at least 1.0 cm (3/8 inch) from the edges

To avoid the excessive file sizes associated with color submissions, the USPTO *strongly* encourages applicants to submit scanned documents in the form of a maximum of 8 bit gray-scale or sufficient shades of gray resolution to fully disclose all content.

5.8 USPTO-SPECIFIC TAGS

5.8.1 NUMBER TAGS

<contract-number>	This element refers to the number of a contract with a United States Government Agency under which at least a portion of the invention was developed; MPEP 310. Contains PCDATA only; parent element is <paragraph-federal-research-statement>.
<foreign-patent-number>	This element refers to a number assigned to a non-U.S. foreign patent by a non-U.S. patent office; MPEP 609; 37 CFR 1.98(b).
<grant-number>	This element refers to the number of a grant with a United States Government Agency under which at least a portion of the invention was developed; MPEP 310.
<patent-number>	This element refers to a number assigned to a patent by the USPTO; MPEP 609, 901.04; 37 CFR 1.98(b).

5.8.2 DATE TAGS

<application-filing-date>	This element refers to the official filing date granted a patent application by the USPTO; MPEP 503; 37 CFR 1.53.

5.8.3 REFERENCE TAGS

<application-reference>	This element references a related application; MPEP 201.11, 608.01(a). Children are <application-filing-date> and <application-number>.
<claim-reference>	This element references a specific claim being cited as allowed, rejected, objected to, appealed, or canceled; MPEP 1206, 37 CFR 1.192(a)(3).
<cross-reference>	This element references a complex work unit tag being referenced within the same Specification, such as a table. It is not the same thing as a dependent claim. [NOTE: they can not appear in the same element/ context ever.].
<dependent-claim-reference>	This element is used within a claim to reference any other claim(s) from which it depends; MPEP 608.01(n); 37 CFR 1.75(c).
<drawing-reference-character>	This element cross-references the portion of a particular figure marked by a reference character; MPEP 608.01(g).
<hybrid-claim-reference>	This element is used to tag a reference to specific limitations in another claim, other than by dependency on that claim; (MPEP 2173.05f).
<patent-reference>	This element references information about a related patent; MPEP 201.11, 608.01(a).
<program-reference>	This element cites information about a computer program stored on microfiche; MPEP 608.05; 37 CFR 1.96(c).

5.8.4 USPTO TAGS SPECIFIC TO THE SPECIFICATION TEMPLATE

<abstract-of-disclosure>	This element refers to the section of the disclosure containing the abstract; MPEP 608.01(a), 608.01(b), 37 CFR 1.77, 1.72(b).
<appendix-data>	This element refers to the section of the Specification which references microfiche appendix information and physical artifacts; MPEP 608.01(a), 608.05, 37 CFR 1.77, 1.96(c).
<background-of-invention>	This element refers to the section of the Specification describing the background of the invention; MPEP 608.01(a), 608.01(c), 37 CFR 1.77.
<biological-deposit>	This element refers to a information related to a biological deposit that has been placed in the repository; MPEP 2403, 2404; 37 CFR 1.801, 1.802.

<biological-deposit-data>	This element refers to a portion of the detailed description containing information related to a biological deposit that has been placed in a repository; MPEP 2403, 2404; 37 CFR 1.801, 1.802. Children are <biological-deposit> and <heading>.
<claim>	This element refers to an individual claim that appears in the section of the disclosure describing the scope of protection sought for the invention; MPEP 608.01(a), 608.01(i), 608.01(m), 37 CFR 1.75, 1.77.
<claim-step>	This element refers to a subsection of an individual claim that allows the claim paragraph to be formatted in a step by step manner as opposed to one long paragraph; MPEP 608.01(a), 608.01(i), 608.01(m), 37 CFR 1.75, 1.77.
<claims>	This element refers to the section of the disclosure describing the scope of protection sought for the invention; MPEP 608.01(a), 608.01(i), 608.01(m), 37 CFR 1.75, 1.77. Children include <claim> and <heading>.
<continuity-data>	This element refers to previous related applications for which priority under 35 USC 119(e), 120, or 371 is being sought; MPEP 608.01(a), 201.11, 37 CFR 1.77, 1.78. Child element is <parent>.
<copyright>	This element refers to the information claiming copyrights which appear in the portion of the Specification describing copyright information related to the invention; MPEP, 608.01(v), 37 CFR 1.77, 1.71(d), 1.71(e).
<copyright-statement>	This element refers to the portion of the Specification describing copyright information related to the invention; MPEP, 608.01(v), 37 CFR 1.77, 1.71(d), 1.71(e).
<cross-reference-to-related-applications>	This element refers to the section of the Specification describing any related applications, including applications for which priority under 35 USC 119(e), 120, or 371 is being sought; MPEP 608.01(a), 201.11, 37 CFR 1.77, 1.78.
<deposit-description>	This element refers to a description of a biological deposit that has been placed in the repository; MPEP 2403, 2404, 2406.01; 37 CFR 1.801, 1.802, 1.804(a).
<description-of-related-art>	This element refers to a sub-section of the background of the invention section of the Specification describing related prior art; MPEP 608.01(a), 608.01(c), 37 CFR 1.77.
<detailed-description>	This element refers to a section of the Specification describing the details and preferred embodiment of the invention; MPEP 608.01(a), 608.01(g), 37 CFR 1.77, 1.71.

<drawing-brief-description>	This element refers to a section of the Specification which briefly describes the drawings, if any; MPEP 608.01(a), 608.01(f), 37 CFR 1.77, 1.74.
<federal-research-statement>	This element refers to a section of the Specification describing any rights the U.S. Government may have to the invention; MPEP 608.01(a), 310, 37 CFR 1.77.
<field-of-invention>	This element refers to a sub-section of the background of the invention section of the Specification describing related prior art; MPEP 608.01(a), 608.01(c), 37 CFR 1.77.
<paragraph-federal-research-statement>	This element refers to a paragraph containing information in the section of the Specification describing any rights the U.S. Government may have to the invention; MPEP 608.01(a), 310, 37 CFR 1.77.
<program-listing>	This element refers to portion of the Specification containing the actual listing of computer program code; MPEP 608.05; 37 CFR 1.96(b)(2).
<summary-of-invention>	This element refers to a section of the Specification which provides a brief summary of the invention; MPEP 608.01(a), 608.01(d), 37 CFR 1.77, 1.73.

5.8.5 OTHER USPTO TAGS

<divisional>	This element indicates the type of related application: divisional under 35 USC 120, or a continued prosecution filing under 37 CFR 1.53(d); MPEP 201.11, 201.06, 201.06(c), 201.06(d); 37 CFR 1.53.
<fiche-count>	This element gives the number of microfiche for a computer program listing appendix; MPEP 608.05; 37 CFR 1.96(c).
<fiche-frame>	This element gives the frame of microfiche for a computer program listing appendix, or the frame where an assignment is recorded; MPEP 106, 106.1, 301, 324, 608.05; 37 CFR 1.96(c), 3.1, 3.73(b).
<figure>	This element gives a specific figure number described in the brief description of the drawings section of the Specification, and used in the drawings and associates it with an XML external entity reference to an electronic representation of the figure using the <artwork> element; MPEP 608.01(a), 608.01(f), 608.02; 37 CFR 1.77, 1.74, 1.81.
<parent>	This element gives a parent application in a chain of continuity under 35 USC 119, 120, or 371; MPEP 201.11, 201.13, 201.14, 202.04.

<referenced-applications>	This element gives information about generally related applications in the cross reference to related applications section of the Specification where no priority under 35 USC 119, 120, or 371 is being claimed.

5.8.6 PHRASES

<a-371-of-international>	This element is used to indicate that the type of continuation under 35 USC 120 being claimed is a to an application filed under 35 USC 371; MPEP 201.11.
<and-which-is-a>	This element is used to indicate a branch in the chain of continuity under 35 USC 120 being claimed, and indicates that the child application has multiple parent applications; MPEP 201.11.
<continuation-in-part-of>	This element is used to indicate that the type of continuation under 35 USC 120 being claimed is a continuation in part; MPEP 201.11, 201.08.
<continuation-of>	This element is used to indicate that the type of continuation under 35 USC 120 being claimed is a continuation; MPEP 201.11, 201.08.
<continued-prosecution-application>	This element is used to indicate that the prosecution of the application is being continued, and represents a new filing; 37 CFR 1.53(d).
<continuing-reissue-of>	This element is used to indicate that the type of continuation under 35 USC 120 being claimed is a continuation of a reissue application; MPEP 201.11, 201.08.

6 APPENDIX A : GLOSSARY

This section contains a list of frequently used terms.

Child Element	An element that is nested inside another element. For example, in <first> <second></second> </first>, the SECOND element is the child element of the FIRST element. Also called a sub-element.
Current Element	Element containing the insertion point or selection.
Document Type Definition	The Document Type Definitions (DTD) define the way markup language is used in a set of documents. A DTD declares all the element names that can appear in a document, the hierarchy in which they can be arranged, and the type of content they can have.
Document Window	Main window in WordPerfect which displays the textual components of the document. (Displays element tags when in the Show Codes view.)
DTD	*See* Document Type Definition.
Element	The structural building block of XML documents. All content within a document must be contained within elements. Element names should be descriptive and illustrative of their content. They can also contain other elements within them, called child elements.
End tag	Tag that closes or ends an element. Tag syntax always calls for angle brackets to surround the name of the element preceded by a forward slash (/), e.g., </name>.
Parent Element	An element into which another element is nested. In <first> <second> </second> </first>, the FIRST element is the parent element of the SECOND element.
PC DATA	This term usually appears in the Elements window or Valid Elements drop down menu to indicate that PC Data (text), is allowed within the current element.
Required Element	An element's sub-element or child element that the DTD requires in order for the document to be valid.
Start tag	The opening tag that begins an element. Tag syntax always calls for angle brackets to surround the name of the element, e.g., <name>.
Structured Document	A document that contains data entered by a patent applicant using a document template.
Tag	Markup embedded in a document that marks and element, e.g., <first> <name> John </name>.
To Tag	To insert an element so that its Start and End Tags appear on either side of the information to be identified.

Validation	A series of technical standards and business rules or "checks" that are used to validate incoming patent application documents submitted electronically for compliance.
XML Tree	Displays the document's elements and child elements in hierarchal form with child elements contained within the start and end brackets of the parent elements. Allows for navigation by clicking on the start or end brackets surrounding the elements displayed in he XML Tree.